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HARVARD STUDIES
IN
CLASSICAL PHILOLOGY

*EDITED BY A COMMITTEE OF THE CLASSICAL
INSTRUCTORS OF HARVARD UNIVERSITY*

VOLUME LXI



CAMBRIDGE
HARVARD UNIVERSITY PRESS
LONDON : GEOFFREY CUMBERLEGE
OXFORD UNIVERSITY PRESS
1953

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PRINTED IN THE UNITED STATES OF AMERICA

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IONIA, LEADER OR FOLLOWER?

BY GEORGE M. A. HANFMANN

A HUNDRED years ago, the history of Ionia had to be written from literary sources. According to the ancient chronographers, the Ionians came to Asia Minor in the eleventh century B.C. Homer was the next witness. He was an Ionian, he was the first and greatest poet of Greece. It seemed logical to assume that the civilization of Ionia during the Trojan wars and immediately thereafter lived up to this splendid beginning. Then, in the seventh century B.C., the elegiac poets Callinus of Ephesus and Mimnermus of Colophon and Smyrna testified for Ionian valor in battle and for the Ionian genius in the expression of individual emotions. Alcman went from Sardis to Sparta as herald and pioneer of a new lyric poetry. The lives and works of these poets seemed to prove that the Ionians were bringing civilization from the Near East to the Greek mainland. They were followed in the archaic period by the great galaxy of Ionian philosophers, scientists, and historians, who laid the foundations of Western civilization. Thales, Anaximander, Anaximenes, and Hecataeus of Miletus; Xenophanes of Colophon and Heraclitus of Ephesus guaranteed Ionian leadership in intellectual endeavors and geographical research; Anacreon of Teos and Herodotus left no doubt of the refinement and sophistication of Ionian culture in the time before the Ionian rebellion. Accounts of bold exploration undertaken by Ionian seafarers and histories of foundations of Ionian colonies from the Crimea in the east to Spain in the west made them appear as logical successors of the Phoenicians. It seemed legitimate to regard the Ionians as leaders in that crucial transition, by which the cultural leadership of mankind passed from Mesopotamia and Egypt to Classic Greece.

This was a coherent and satisfying picture; yet it is a picture, which is far too simple for the facts as we know them now. It may still be the right picture for the intellectual and literary history of Greece; it is not the right picture for the economic history and the history of art.

Archaeology is at least partly responsible for the reappraisal of the early history of Greece which is now in progress.¹ But precisely because archaeology has been instrumental in producing so much new

knowledge, it is important that we should clearly understand the limitations of archaeological evidence. Archaeology can show to us the relative sequence of major phases in the life of a city or a region, but unless the archaeologist is aided by epigraphic finds, he cannot provide absolute dates for historic events. Archaeology can provide important material for the social, economic, political, and religious life of a community; it cannot offer any direct evidence for the development of mind. These are general limitations, but there are also more specific difficulties, which inhibit any attempt to reconstruct the culture of Ionia on the basis of archaeological material. The evidence is as yet scanty. The recent Anglo-Turkish excavations at Old Smyrna are the first successful attempt to uncover at least a part of an archaic Ionian city. We know to some extent the archaeological history of several major sanctuaries—those of Hera on Samos, Artemis of Ephesus, Apollo of Didyma. We have fragmentary bits of information about some other archaic sites. Yet the comprehensive “ecological” approach, in which archaeological material is systematically related to the study of the geographical character of a region and to the history of the development of its resources, remains to be applied to the principal city states of the Ionian Federation.² The views presented in this essay must therefore be regarded as interpretations of very limited material.

On the other hand, our archaeological knowledge of Ionia has profited not only from excavations in Ionia proper. All of Asia Minor has become much better known and we can form a much more adequate idea of Ionia’s relations with her Phrygian, Lydian, and Carian neighbors³ than was possible two generations ago.

Since the use of Ionian dialect has been taken as the identifying trait of Ionian areas in archaeology by some scholars, it may be well to forewarn the reader that in this study Ionia is limited to the states of the Ionian Federation on the mainland of Asia Minor and the two adjacent islands of Chios and Samos. In principle, I shall not attempt to assess the evidence of either the Greek or the epichoric, the Phoenician, and the Aramaic inscriptions. It may suffice to remark that the dates and the distribution of inscriptions in “native” tongues show that Asia Minor was inhabited by a multitude of barbarian tribes practically to the Age of Alexander. For the Ionians, the barbarian was never far from the gates; and often he was among the dwellers within the city. Long ago Wilamowitz pointed out⁴ that there was a Carian phyle in Samos and that Carians are named in Greek sources as cosettlers of Erythraea. The founding

fathers of Miletus had allegedly taken Carian spouses.⁵ Of the four inscriptions reported from Old Smyrna, two are non-Greek — an interesting sidelight on the linguistic situation in an Ionian city of the seventh century.⁶ Even in the archaic period, the father of Thales, Hexamydes, and the dedicant of a famous statue, Cheramydes ("Hera of Samos," Louvre), had Carian names. How little we know of the barbarian tongues spoken in western Asia Minor, has been dramatically demonstrated by a discovery of two inscribed clay tablets in the sanctuary of Zeus of Labranda in Caria. They are inscribed in Carian on one side and in an alphabet hitherto unknown on the other. It is said to include some "Cypro-Minoan" signs.⁷ It will come as no surprise, if future research in linguistic geography shows that the Greek tongue long remained a marginal phenomenon in Asia Minor.

For the most part, the Anatolian tribes with whom the Ionians had to deal were at a cultural stage quite unlike the thoroughly urbanized states of Syria, Phoenicia, and Mesopotamia. Although their ruling dynasties held populous, fortified castles and towns,⁸ they were largely pastoralists and farmers. Many of their feudal leaders may have intermarried with the "leading families" of the early Ionian settlers⁹ and thus become Hellenized, but the countryside yielded slowly to Hellenization. Anatolian religious traditions remained embedded in the major cults of Ionia and the "natives" seem to have made some contributions to Greek music and to Greek religious poetry;¹⁰ but there was also a danger of real barbarization, especially in smaller Greek settlements, and it was not always resisted.

Finally, though many of the Greek settlements may have been accomplished by relatively peaceful infiltration, military encounters with the Anatolians cannot have resulted in easy victories for the Greeks, particularly in the early phase of the Ionian migration. Xenophon's army was superior to Anatolian guerillas, but Homeric heroes fought on equal terms with their Anatolian counterparts. As one may infer from the fame of Carian mercenaries, the Anatolian mountaineer was a hardy fighter. It was not only the spirit of adventure and business enterprise which drove the Ionian cities so quickly toward a policy of maritime expansion and far-flung colonization; their inability to conquer any considerable stretches of land from the Anatolians must have provided a powerful additional stimulus.

After these general considerations, we may turn to some of the major questions concerning the early history of Ionia. When did the Greeks first arrive in Ionia? The excavations on the Milesian

peninsula (Fig. 1) which are discussed in detail later on, have provided an answer. Sailors from Mycenaean Greece as well as from Minoan Crete had landed at a native settlement near the site of the later temple of Athena already about the middle of the sixteenth century B.C. The Greeks may have taken over in the fifteenth century B.C. By the thirteenth century, a small area had been fortified. It must remain in doubt whether this "Athena Settlement" ever amounted to more than a small village and a fort. Mycenaean sherds stop about 1200 B.C.¹¹ The excavators argue that the place continued to be held by the Greeks, but have not so far proved their case.¹²

West of the "Athena Settlement" ("Theaterhügel" of Fig. 1) in the limestone ridge of Deirmen Tepe (shown on the left in Fig. 1) the German excavators discovered chamber tombs cut into the foot of the eastern slope. They thought that these tombs represent the cemetery of the "Athena Settlement." Neither the tombs nor their contents have been published, but Furumark, who has seen the pottery from these burials in the Berlin Museum, dates it 1300-1200 B.C. (Mycenaean III B and Early III C).¹³

A third site in the region of Miletus had a native Prehistoric settlement. It was found in 1909 on a spur of the limestone range known as Kilik Tepe, 2.5 km. south of Hellenistic Miletus and west of the road to the village Akköy. Some scholars believe that the archaic city of Miletus was located here rather than on the peninsula. To judge from the objects described in the terse report, the village may go back to the Early Bronze Age. It is not known how long it lasted. Two Geometric Greek sherds were found, but nothing Mycenaean.¹⁴

Thus we have at Miletus archaeological evidence for two Prehistoric Anatolian settlements ("Athena" and Kilik Tepe), a short-lived Minoan trading post ("Athena"), and a small Mycenaean settlement ("Athena" and Deirmen Tepe), probably intended to protect the port at "Theater Bay."

Excavators of Samos have assumed that a Mycenaean settlement existed on or near the site of the Heraeum and on the hill of Tigani Castro¹⁵ in the area of the later city of Samos. At Tigani, some vases found in a stone-lined pit amidst a mass of "Prehistoric fill" have been described as Mycenaean. No Mycenaean buildings have come to light.¹⁶ The vases are actually Minoan; they prove contact between Minoan Crete and Samos in Late Minoan I A period (ca. 1550-1500 B.C.); they prove nothing for the time of the arrival of

the Greeks.¹⁷ For the Heraeum, the excavators refer to an allegedly Mycenaean chamber tomb, which is unpublished. E. Buschor has also mentioned "Late Mycenaean and Sub-Mycenaean cups," found in the fill behind an early terrace wall. These, too, are unpublished and it is not clear whether they are genuine Mycenaean products or local imitations of Mycenaean shapes, an uncertainty which also prevails with regard to the pottery from the chamber tomb.¹⁸

Particular importance attaches to the recent excavations of Old Smyrna (Bayrakli). They prove beyond cavil that an Anatolian settlement flourished there throughout the second millennium.¹⁹ A few unstratified Mycenaean sherds indicate that here as at Larisa, Chios, and perhaps Phocaea²⁰ the natives could secure an occasional Mycenaean pot, presumably by trade.

These are the facts on Mycenaeans in Ionia. We see that the first Greeks may have arrived in Ionia in the sixteenth century B.C., but we also perceive that they failed to develop more than a few trading posts similar to the "Athena Settlement" at Miletus. Such a small coastal town might easily qualify as the Millawanda of the Hittite texts, which was the only "city" continually held by the Ahhiyawa and one over whose ruler the King of Ahhiyawa exercised only a vague and remote control.²¹ In any case, the few Mycenaean settlements in Ionia were apparently engulfed by their Anatolian neighbors during the collapse of the Mycenaean civilization. Thus a Carian dynasty may have taken over at Miletus.²²

Our next question is crucial for the subject of cultural leadership in the early phase of historical Greece. If the Ionian cities were not founded by the Mycenaeans during the Bronze Age, when did the so-called Ionian migration take place? Eratosthenes had put it into the eleventh century B.C. (1044). Many modern historians and archaeologists suggest that the Dorian invasion drove the Ionians to found new cities overseas.²³ Others, led by Wilamowitz, resolutely discarded the traditional dates of Greek chronographers and placed the Ionian migration and the founding of the great Ionian cities anywhere from the tenth to the eighth century B.C.²⁴ There is more at stake than chronology. If the Ionians came in the eleventh century, they came as heirs of the Mycenaeans with a cultural legacy to preserve. If they came in the tenth century, they came at the time of the lowest ebb of Greek civilization, had to start from scratch and to develop the urban civilization anew. If they came in the ninth and the eighth centuries, they came at a time when the cities of the Greek mainland were on their way toward the development of the polis,

when seafaring over longer distances was again coming to the fore, and when the first bold explorers from Greece were already venturing on voyages toward the Near East.

Archaeological arguments bearing on Ionian migration can be drawn chiefly from architecture and pottery. Theoretically, only architecture can provide cogent proof that a settlement was established and inhabited by the Greeks continually from the time of the Migration Period (1200–1000 B.C.) into historical times. Actually, the architecture of the earliest period is so primitive that it is often not possible to tell a Greek from a non-Greek structure; but if Greek pottery constitutes a major part of the material found in association with such early structures, it is reasonable to infer that the place was inhabited by Greeks.

Old Smyrna (Bayrakli) may provide some indication of the manner in which early Ionian cities had developed. Only preliminary reports are available and since the excavators, J. M. Cook and E. Akurgal, have already been led to revise their earlier opinions, it is not possible to present more than tentative conclusions. In 1952, they suggested that a native Anatolian settlement was gradually infiltrated by the Greeks and that "Smyrna had passed completely into the hands of the Ionians by the end of the ninth century."²⁵ Now (1953) they hold that the Greeks were established at Smyrna not later than 1000 B.C. An isolated oval one-room house of mud brick is said to date around 900 B.C. and is described as "the earliest Greek house yet discovered" (*ILN*, Feb. 28, 1953, p. 328, fig. 4). Remains of rectangular buildings were observed in the ninth century level (*loc. cit.*, fig. 5); perhaps their walls served as backing for an early city wall of mud brick and irregular masonry. Two strata of oval houses (*loc. cit.*, fig. 6) and a reconstructed defensive wall are attributed to the eighth century and the earliest temple to around 700 B.C. It looks as if after a period of transition, during which the Greeks still lived in barbarian houses, the town may have been reorganized on a genuinely urban plan as a densely built-up area with the city wall enclosing houses of fairly uniform size arranged along narrow streets and with a temple set against the city wall.²⁶ This "democratic" plan is in marked contrast with the "acropolis" type of settlement, in which the palace of the ruler and the shrine of the city god or the city goddess rise on a fortified eminence, while the dwellings of the citizens are scattered round about in hamlets and villages.²⁷ Larisa-on-the-Hermus shows that the "acropolis" type survived in the immediate vicinity of Smyrna well into archaic times.²⁸ It will be

interesting to see whether the plan of early Smyrna will bear out a suggestive reconstruction of a typical early Ionian colonial town made recently by W. A. Eden who utilizes the plan of a fortified medieval village on Chios for this purpose.²⁹

The evidence for Miletus is tantalizingly ambiguous. The leading architectural historian on the site, A. von Gerkan, has argued that the areas probed in the German excavations are not those occupied by the archaic Greek city; the finds made are too sparse and scattered and much of the region later covered over by the Hippodamian city would have been too swampy for habitation during the founding period.³⁰ As far as actual discoveries go, we are concerned with two different settlements. The first is the "Athena Settlement" already known to us from the discussion of the Mycenaean period (Fig. 1, "Theaterhügel"); the second is the southernmost hill of the Milesian peninsula, designated in Fig. 1 with its Turkish name "Kalabak Tepe," "Hat Hill." On the basis of material from a small trial pit dug at the western foundation of the (fifth century) temple of Athena, the excavators claim that the settlement survived as a Greek town from the Mycenaean through the Protogeometric to the Geometric Age. No complete building was recovered and the evidence of published pottery is insufficient to permit any safe conclusions.³¹

On Kalabak Tepe, some house walls were found in excavations which also produced Greek Geometric sherds. The house walls must be earlier than the first fortress wall, which is dated tentatively in the seventh century B.C. The Geometric sherds, which would be decisive for any attempt to date the earliest settlement on this hill, are lost.³²

The relations between the "Athena Settlement" and the fort on Kalabak Tepe have provoked considerable speculation. Despite his own threat that archaic Miletus might yet rise from an entirely different location and refute all theories, A. von Gerkan is nevertheless tempted to have Neleus and his men land from Athens at the "Athena Settlement." Operating from that foothold they seized and fortified Kalabak Tepe to advance against the yet-to-be-found Miletus.³³ It is not quite clear whether von Gerkan associates Neleus with the first arrival of Mycenaeans or with a reinforcement of a preëxisting "Athena Settlement" in the Submycenaean Age. My own theory is based on three facts: pottery from the "Athena Settlement" seems to indicate a gap in the Greek occupation between 1200 B.C. and 1000 B.C.; the earliest traces of occupation on Kalabak Tepe do not seem to go back beyond 700 B.C.; and the *Iliad* reports that a Carian prince was ruling over Miletus in the time of the

siege of Troy.³⁴ These facts can be explained by the assumption that the Greek settlement was taken over by Carian rulers after 1200 B.C. and that the settlement on Kalabak Tepe was made by new Greek arrivals, who then reconquered the "Athena Settlement."

Something similar apparently occurred at Ephesus, where the Samians, unable at first to take the barbarian town, established a "beachhead" at the Koressos.³⁵ Unfortunately, the location of the earliest Greek settlement at Ephesus is unknown. Josef Keil discovered a stratum with Greek archaic, Orientalizing, and Geometric sherds in three trial trenches on the slopes of Mount Pion, below (north and west of) the stadium and fairly close to the coastline of the ancient harbor (Trenches 2, 4, 8, marked "A" in Fig. 2). In a recent letter, Hofrat Keil adds that there were only small "nests" of ancient soil preserved among the foundations of later buildings, as the area was included in the Hellenistic city of Lysimachus. No buildings were recovered. The number of early sherds found was "inconsiderable" and only a handful have been published (Fig. 4).³⁶

Ancient Colophon has proved just as hard to find as Ephesus and Miletus. Excavations undertaken by Hetty Goldman in 1922 and 1925 revealed a prosperous city of the fourth century B.C. on the Acropolis Hill east of the stream of Kavakli Dere. There was also found an inscription of the late fourth century containing a resolution "that the ancient city, which brought glory to our forefathers when they . . . established it and founded its temples and altars, be enclosed in a common system of walls with the present (fourth century) city." L. B. Holland suggests that the large defensive system extending north and east from the Acropolis was built in response to this resolution and that consequently "the ancient city" must be located within the fortified area, but nothing is known about it. A house wall of the seventh or the sixth century has been found on the Acropolis Hill and Holland argues from the number of early sherds found in the Acropolis area that there was for a time a considerable settlement on that hill, though it may have been only a short-lived one.³⁷ A Geometric cemetery, which must belong to the "ancient city," is dated by H. L. Lorimer around 800 B.C.³⁸

It is not an exaggeration to say that all we know of the architecture of the earliest Greek cities in Ionia is represented by a few houses. The renowned sanctuaries have not yielded much additional information. Only in the precinct of Hera of Samos did the excavators succeed in securing some information about early structures. As we

have seen, Mycenaeans may have participated in the cult during the late Bronze Age. The excavators also make the interesting suggestion that the Mycenaean chamber tomb may have been preserved because it had been endowed with a sacred character, like the tomb at Delos which later Greeks interpreted as the grave of the Hyperborean Virgins.³⁹

The earliest altar preserved (Altar I) is said to "approach the Mycenaean or Submycenaean Age." Bits of house (?) walls and a terrace wall west of the altar are assigned to the same period. No datable material has been published.⁴⁰ Apparently Buschor is not completely convinced that the sanctuary was in Mycenaean hands; rather, "the cult of Hera gradually assumed purely Greek forms in the early first millennium." The second altar (Altar II) is shown to be Greek by the Greek Geometric pottery found underneath; the excavators date its construction around 850 B.C.⁴¹ They believe that a paved road ("East Road") led from the altar to a primitive hut, in which the miraculous wooden image of Hera was housed. A cylindrical limestone block is interpreted as the base for the xoanon. The first temple structure which left recognizable traces, the long "First Hekatompedos," is given a date of 800 B.C. The altar was enlarged three times and a primitive peristyle added to the Hekatompedos before the beginning of the Orientalizing Age. This sequence, though based on very poorly preserved structures, seems sound enough; but there are reasons to think that the dates suggested by the excavators should be brought down.⁴²

The lowest levels of the Artemisium at Ephesus (which lay outside the archaic city) and of the sanctuary of Apollo at Didyma are under the water table. None of the structures preserved at either site antedates the late seventh century.⁴³ Pausanias knew that both sanctuaries went back to non-Greek cults; open-air cult places of Anatolian tribes may have preceded the Greek shrines.⁴⁴ Only some late buildings are known from the shrine and oracle of Apollo at Klaros; French scholars have just resumed the excavations.⁴⁵ Fragments of a precinct wall and a deposit of Geometric objects prove that the sanctuary of Apollo at Phanai on Chios was in existence in the eighth century B.C.⁴⁶

To sum up the evidence of architecture: the earliest Greek house known is allegedly the oval house in Smyrna for which a date of 900 B.C. is claimed; the earliest Greek sacral structure is the Second Altar of the Heraeum of Samos, *ca.* 850–800 B.C.; and the earliest

Greek graves discovered in Ionia are perhaps those of Colophon dated around 800 B.C.⁴⁷

The odd bits of information drawn from architecture can be supplemented, to a degree, by a study of pottery found in Ionia. It must be clearly understood, however, that we have no reliable "absolute" dates for any Greek objects between 1200 (or 1170 B.C.) and 800 B.C.⁴⁸ and that the correlations with Near Eastern chronologies benefit directly only a few of the vast variety of Greek wares produced between the end of the Mycenaean Age and the beginning of the Orientalizing period.⁴⁹

Two major phases in the development of Greek pottery are relevant to the dating of the Ionian migration, the Protogeometric and the Geometric. Thanks to V. Desborough's careful investigation, we can now speak with greater assurance about the chronology and distribution of Protogeometric wares. The evolution of the Protogeometric style can be established at Athens, where the cemeteries of the Kerameikos and the graves found in the Agora enable the student to trace step by step the changes of vase types and decoration from the Submycenaean through the Protogeometric to the earliest Geometric period. Attic Protogeometric is dated by Desborough between 1025 and 875 B.C. and subdivided into four consecutive phases.⁵⁰ He furthermore shows good cause for believing that this style spread from Athens in the second half of the tenth century.⁵¹ Not all Protogeometric styles were contemporaneous; Northern Cyclades, for instance, with Delos a probable center, developed a Protogeometric style of their own *ca.* 950-900 B.C. and kept it going for more than two hundred years.⁵²

For the Ionian sites of Samos, Chios, and Miletus (Fig. 3, the two sherds with concentric circles, top and second row, left) Desborough finds evidence of very slight contacts with Greece. Perhaps the sherds from Samos and Miletus represent a late phase of Attic Protogeometric.⁵³ Evidence is more substantial for Old Smyrna. Here again the ware found corresponds closely to Attic Protogeometric. In his first report, J. M. Cook held that the earliest Protogeometric was found along with native Anatolian wares and was imported. He dated it in the second half of the tenth century. He now presents as provisional conclusion that the pottery of the earliest Greek levels at Smyrna "belongs to an early stage of Protogeometric and should be dated perhaps as early as 1000 B.C. or even in the eleventh century."⁵⁴ The amounts of Protogeometric found in Samos and Chios are "microscopic" and at least in the case of the Heraeum

of Samos, where excavations have been extensive, this should count for a good deal. Desborough dismisses the possibility that the few Protogeometric sherds from Samos could represent a Greek settlement.⁵⁵ Miletus is inconclusive; there is unpublished pottery from the campaign of 1938 in the Museum in Izmir which may hold the clue.

Gradually, we are learning something about the process of the migration. First, perhaps, only a pot traveled, whether as booty or as object of exchange; this no more proves the arrival of a Greek colony than do the isolated Submycenaean and Protogeometric sherds found in Babylon, Niniveh, and on the Syrian coast.⁵⁶ Then traders began to arrive and regular import was established. Small Greek groups, often from different regions of Greece, began to settle in native towns. Eventually, they became strong enough to take over the native settlements. It is at this stage that one would expect the arrival of a substantial number of able-bodied men, a "foundation" in the manner of the later Greek colonies; but we must be cautious in accepting the legendary accounts concerning such founders and foundations in view of the Greek habit of projecting practices of later times into a distant past. On the whole, local production of Greek pottery may be regarded as an indication of the time when a settlement had become Hellenized. Although we must await the final publication before we can draw any safe conclusions, it looks as if there might have been a preparatory phase of Greek infiltration at Smyrna (*ca.* 950–850 B.C.?). At Samos, on the other hand, traces of preliminary contacts are scanty and Hellenization much more rapid.⁵⁷ The arrival of Greek colonists may have occurred around 850 B.C.

The prominence of Attic vases and Attic influence upon the earliest pottery of Smyrna and Miletus (?) open suggestive possibilities. There may be something to the tradition, which makes Neleus go from Athens to Miletus. Attica is also mentioned among the many Greek places from which settlers came to Samos. One wonders, too, whether there is any connection between these early manifestations of Attic influence and the "Attic-Ionic" elements in the language of Homer.⁵⁸

The Protogeometric style is apparently well represented at Old Smyrna, but only a full publication of the finds will show whether this Protogeometric of Smyrna starts as early as the excavators contend. For the other Ionian cities, the evidence lies in the Geometric phase, and it is to the study of the Eastern Geometric styles that we must now address ourselves.

No competent student of Greek Geometric styles in recent times has doubted that the ideal of the Geometric style was formulated on the mainland and spread from there, at least as far as the actual Greek territories are concerned; Cyprus, to be sure, represents a different though parallel sequence, which influences a region inhabited by non-Greeks: Cilicia, Syria, and even North Mesopotamia. The Cypriote contributions are not, however, a major influence in Greece until the Late Geometric phase, if then.⁵⁹ Although there is much variety of regional development, we can distinguish three major phases of Greek Geometric: Early, Middle or "Ripe," and Late. The early Geometric is distinguished by such forms as black-glazed jugs and skyphoi with rather small ornamental panels. Clay-ground vases with simple decoration and modest ornamental vocabulary sometimes succeed, sometimes run parallel with the austere black-glaze repertory. Meander becomes one of the favored motifs. This phase is best known from Athens, Argolid, Corinth, Rhodes, and Kos. Its duration is often guessed at, for Athens, as about 900 (875, Desborough) to 800 B.C.; it may have lasted in Corinth until about 750.⁶⁰ For Rhodes and Kos, its beginning is placed by Desborough about 850 B.C.⁶¹ Like the Protogeometric style, the Early Geometric manner survived in some regional schools considerably longer than in others; but it is probably not incorrect to say that in Athens and Rhodes it was superseded by the "Ripe" Geometric sometime in the early eighth century B.C. In the Cyclades, the Early Geometric manner seems to have run side by side with the surviving Protogeometric tradition.⁶² In Eastern Greece, if we except Rhodes and Kos, the Early Geometric style seems to be represented in very small quantity. It is possible that the publication of material from Old Smyrna will prove this scarcity a matter of chance, but it may also prove that this phase was later in coming than on the mainland.⁶³ At any rate, the pieces known from Miletus (Fig. 4, center and right, top row) and Samos seem to depend on inspiration from the mainland and from the Cyclades; ⁶⁴ none of the fragments from Ephesus (Fig. 4) seems Early Geometric.⁶⁵

Methodically, the ideal procedure would entail a systematic comparison of the earliest pottery of each Ionian site with the pottery of the regions, from which the earliest settlers are said to have come in the literary sources, but our material is not as yet extensive enough to permit a successful application of this method.⁶⁶

The next, the "Ripe" phase of the Geometric style,⁶⁷ presents some examples of Ionian vases which seem to depend on designs developed

on the mainland. Thus the horses, ducks, and the remarkable prothesis scene found in Samos might have been copied from mainland or Cycladic models.⁶⁸ But this is only a sideline. The major development is the emergence of a homogeneous Eastern Greek style in an area which includes Rhodes, Knidos, Kos, Miletus, Samos, Ephesus, Chios, Smyrna, and Phocaea, and appears to reach into Aeolic territory at Pitane and Myrrhina. Such an expansion presupposes export of pottery; and it may well have involved an enlargement of pottery establishments from domestic production and small shops of individual potters to regular "Potters' Quarters."⁶⁹ The style was propagated by intensive though probably short-distance commerce carried on by sea, perhaps in a manner not altogether dissimilar to the pottery trade among the Greek islands which Casson observed not so long ago.⁷⁰

Rhodes appears to have been the center of the new style. It is of considerable interest for early Greek history that the fashions set by Rhodes were followed in this Eastern Greek littoral area from the early eighth to the early sixth century B.C. Although this style continued to receive impulses from the Greek mainland and the Cyclades, it achieved an unmistakable character and vocabulary of its own. It prefers panels to continuous zones and delights in rich constructions of hatched triangles, lozenges, and the so-called "Rhodian trees." Within this ambient, the Rhodians show themselves as the most precise potters and the strictest draftsmen; Chiote pottery comes next; while the craftsmen on Samos and in the Greek cities along the coast of Asia Minor display a looser sense of construction, a broader, more pictorial manner of drawing.⁷¹

In one way, this situation is rather surprising. Next to Crete, Rhodes was certainly in the best position for contacts with the half-Oriental Cyprus and the highly developed Near Eastern cities of Syria and Phoenicia. It has been argued that it served as transshipping center for Cypriote and Near Eastern goods.⁷² Yet the Rhodian Geometric is technically and artistically a Greek style and more Greek than the Geometric production of the Ionian cities. These show certain foreign elements of style and technique which must have appeared to Greeks from Athens and Corinth as "barbarous." It used to be thought that these foreign touches were due to early "Orientalization," to early contacts with the Phoenicians or trade with the Near East, but in actual fact they seem to be Anatolian, due to the close daily contacts of the Greeks with their barbarian neighbors in Asia Minor. Thus the taste for such colorful techniques

as red paint and white slip is probably due to Anatolian influence. Shapes and details of shapes were apparently imitated after Phrygian metal vases; ⁷³ there is considerable probability that the Phrygians and other tribes of the interior may have possessed not only superior resources of metal but a certain superiority in the production of the simpler types of metal objects in the eighth and the early seventh centuries B.C.⁷⁴ Finally, certain decorative motifs found on Eastern Greek vases are curiously paralleled on Phrygian Geometric vases found at Boğazköy and Alishar.⁷⁵ These influences from races of rather bizarre taste tended to blur the inherent strictness and discipline of the Greek Geometric heritage. Conversely, the influence of the Greek cities penetrated the arts of the Anatolian tribes; if the art of Ionian cities of the coast represents a first degree of barbarization, the zone of curious "Asiatic Geometric" styles further inland may well be interpreted as a second degree of barbarization of styles fundamentally indebted to Greek ceramics. Viewed separately, the little square rider and sinuous horse of a Phrygian sherd from Boğazköy (Fig. 6) might well strike us as a bold and original attempt of a primitive artist to represent a horseman for the first time; ⁷⁶ viewed in conjunction with the Greek horsemen from Ephesus (Fig. 7), it can be seen as an attempt to wrestle with some impression or memory of Greek Geometric figure style, whose angular rhythm and structural precision are quite foreign to his way of feeling.

On the mainland and perhaps in the Cyclades, the "Ripe" phase can be clearly distinguished from a late Geometric phase, which is distinguished by laxer shapes, keen interest in ambitious figurative compositions, and the first appearance of Orientalizing ornaments within a decorative scheme, which is still Geometric. In Athens it covers the second half of the eighth century, in Corinth perhaps the last quarter, but I cannot see any substantial change in Eastern Greek Geometric, where the style develops continuously until about 700 B.C.⁷⁷ At least two, possibly more of the sherds from Miletus shown in Fig. 3 (meander sherd, second row, right and the sherds with triangles, second row left), and probably all but one of the fragments from Ephesus (Fig. 4; the sherd with rays, bottom, left is the exception) must be assigned to this style.

Eastern Greece does have a Late Geometric style, to be sure, but it is a retarded development often described as "Subgeometric." Since it falls into the seventh century, we shall postpone its discussion until we consider the situation of Ionia during the "Orientalizing Age."

If we sum up the conclusions from the study of pottery, it appears that the early Geometric phase with its dependence on the mainland and Cyclades might reflect a stage in which groups of settlers were arriving in Ionia. The vastly increased production of pottery from the early eighth century on bespeaks growth of population; the emergence of a recognizable Eastern Greek koine argues increase of seafaring and trade. The pioneering phase of the first arrivals may have spanned at least three generations — perhaps before 850 for Smyrna, about 850 for Samos, possibly as late as 800 for Ephesus; there can be little doubt that the eighth century was the first important phase in the life of the major Ionian settlements as cities. During this period, the Greeks continued to consolidate their holdings, which must have been small enough in the beginning. Larisa-on-the-Hermus is but 15 miles or so from Smyrna, around ten miles from the Aiolic Kyme. Yet Smyrna had been Greek for over a century before Larisa was wrested from the barbarians (*ca.* 700 B.C.).

What emerges from this survey is a picture of Ionia as a frontier region between Greece and Anatolia. In some ways, the Ionians were neither ahead nor behind the other Greeks; whether the "house" models from Samos and Perachora are early shrines or domestic buildings, they are certainly buildings of the same kind. The earliest elongated shrine of Hera on Samos is clearly derived from similar elongated structures of the mainland.⁷⁸ In other words, once the first phase of settlement was over, the people built the kind of houses and shrines they had been accustomed to at home. But they did live side by side with barbarians and it showed in things made for daily life and sometimes in speech as well.⁷⁹ They were colonial pioneers, land-hungry and ready to move on to new places;⁸⁰ they were not the cultural leaders of Greece.

Our third question concerns the role of Ionia during the great awakening of Greece known as the Orientalizing period. There was, I think, a decided contrast between the impact upon Ionia in the early and in the late phase. It has been argued that, for Corinth, the Orientalizing period began in the eighth century.⁸¹ Crete certainly shows evidence of early "Orientalization." In Athens, the ferment caused by the discovery of a new world is manifest throughout the first half of the seventh century. Yet Ionia remains something of a back-water from 700 to 650 B.C.; though Ionian ships must have joined in the voyages to Cyprus and North Syria around 700 B.C., it is the Rhodians and the Ionians from the Cyclades who seem to have led the Near East trade. As the Homeric hymn to the Delian Apollo

indicates, many people who used "Cycladic" pottery would have called themselves Ionians.⁸² This may be the explanation, too, for the famous Yaman or Yavan, with whom the Assyrians clashed several times in the late eighth and early seventh century, and who are usually believed to have been Ionians.⁸³

It is instructive that Eastern Greek pottery shows a much more restricted "Orientalization" than the Cretan, Corinthian, or Attic wares in the early phase, and that when an Orientalizing style develops, it has a very different character from those of the mainland. To begin with, the most influential and most widely dispersed style is the "Subgeometric" style of Rhodes, best known through the so-called bird bowls and the closely related jugs. These are imported and imitated in most Eastern Greek sites.⁸⁴ The duration of this style can now be defined thanks to the finds at Al Mina, Tarsus, and Istria.⁸⁵ These wine cups and wine jugs seem to have remained fashionable for three generations, from around 700 B.C. to around 630 B.C.

A certain number of sherds found in the Heraeum of Samos illustrate the gradual intrusion of Orientalizing motifs into a style which is still essentially Geometric. We may expect a really comprehensive view of a local Ionian workshop in this phase from the rich finds made at Old Smyrna (Bayrakli). One fascinating example has been published recently (Fig. 5). This fragment of a *deinos* is of great importance for the history of vase painting and of even greater importance for the history of music. For we see here the earliest representation of the seven-stringed lyre, which was allegedly invented by Terpander. The new instrument obviously captured the fancy of the vase painter. He gives it a place of honor in a special panel. One wonders whether the little bird, which hovers over the strings, symbolizes music generally as the bird which sings for the muse on the Helicon in a painting by the Achilles Painter, or is intended more specifically to allude to the high chirping tones of the newly added strings. From such Orientalizing details as the dotted flower (upper right) we may be reasonably certain that the vase was painted in the second quarter of the seventh century, in the very same years when Terpander was gaining national fame. It is, indeed, not inconceivable that the great musician passed through Smyrna on his way to the feasts of the Lydians, whose musical instruments are said by Pindar to have suggested Terpander's invention.⁸⁶

The *deinos* fragment displays greater precision of shape and greater clarity of design than those seen in most other Eastern Greek

wares. Yet it is also illustrative of that broader pictorial quality, which we have already encountered in the Ionian wares of the Late Geometric period. The hatched triangles and lozenges are borrowed from the Rhodian vocabulary (*cf.* Figs. 3, 4); they are not precisely aligned, but wobble hither and yon. The checkerboards and triangles are treated as color-areas rather than "abstract" dark and light contrasts, as they would have been treated in mainland wares. The entire design is carried out in broad strokes rather than precise lines. Parallels for this coloristic emphasis may be seen in "Asiatic" wares. On the other hand, the black-silhouette technique of the lyre and the bird is still Greek Geometric — an indication of that *detente*, which characterizes Eastern Greece.

Side by side with such "Sub-Geometric" wares, we find occasionally more progressive experiments with Orientalizing forms, but these lack the sustained development which we perceive so clearly in Corinth and to a lesser degree in Athens. While the Corinthian artists achieved the first convincing, monumental style for the rendering of mythological narrative in painting, Eastern Greek artists indulged in only a few haphazard attacks upon the problem of bestowing new reality upon the human figure. The curious horsemen from Ephesus represent a brave early try (Fig. 7); the rude marching warriors a later attempt (Fig. 8). They seem, however, to depend on other Greek schools, perhaps even on "Proto-Attic" vases rather than on any Near Eastern models.⁸⁷ The extraordinary ship scenes from the vicinity of Cnidus (Figs. 10a, b) display the hand of an artist, who is ill at ease with the new "Orientalizing" outline technique. His ambitions are praiseworthy, but his uncertain composition "mixobarbarous" — not Greek.⁸⁸

The situation changes radically about the middle of the seventh century. The city of Old Smyrna is replanned according to an "oriented" plan. The houses of that phase destroyed by Alyattes around 610 B.C. show fairly complex plans, which include megaron-like long units; their walls are built of rather careful stone masonry and such amenities of life as bath tubs are not infrequent.⁸⁹ The temple platform of the late seventh century, much larger than its predecessor, was built of fine polygonal stones with deliberate artistic effects derived from the contrast of white tufa and dark andesite.⁹⁰ A very impressive and original structure, a pylon, served as entrance to a sacred precinct.⁹¹ A large new temple was built in Samos on a plan which seems to foreshadow the later Ionic temple plans.⁹² There are traces of similar transformation in the sanctuary of Apollo Phanios

in Chios.⁹³ By the end of the century, the first permanent structure is built for Artemis at Ephesus.⁹⁴

Near Eastern contacts are direct and abundant. Whereas few, if any, Syrian, Phoenician, or Assyrian objects were imported before the middle of the seventh century, there are now Phoenician ivories and Assyrian bronzes in Samos, Syrian (Late Hittite), Egyptian, and Phoenician objects in Smyrna.⁹⁵ Cypriote figurines were imported to Samos — the great majority dating after the middle of the seventh century.⁹⁶ There is, indeed, considerable probability in the theory that Syrian and Phoenician ivory carvers worked in Ephesus and Cypriote terracotta workers came to Samos and perhaps to Smyrna.⁹⁷

In vase painting, the Subgeometric style is rather rapidly transformed into the first real Orientalizing style of Eastern Greece. The luxurious, tapestry-like displays of the "wild goat" style were first launched in Rhodes, probably in very close imitation of Assyrian or Assyrianizing models, but in the last quarter of the seventh century fine pottery of this kind was made in Chios, Samos, perhaps in Smyrna (Fig. 9), and probably in Miletus as well.⁹⁸

The wealth of Ionia was increasing apace. Carl Roebuck has presented strong arguments for his view that the tradition of large Ionian navies goes back to this period; and he credits the Ionians with leadership in developing sea trade in bulk rather than luxury goods.⁹⁹ The revolutionary discovery of coinage occurred at the same time. Thanks to P. F. Jacobsthal's and E. S. G. Robinson's brilliant investigation of the foundation deposits under the earliest base (Base "A") of the shrine of Artemis at Ephesus, we now know that the earliest coins were, indeed, minted for the Lydian kings and that the Ionians of the coastal cities were the first among the Greeks to adopt this epoch-making means of world trade.¹⁰⁰

During the sixth century Ionian prosperity grows, reaching its culmination in the age of Polycrates and Croesus. The great series of sculptures in marble and bronze of the Heraeum of Samos which begins about 600 B.C. includes no less than ten colossal statues. The best architects and engineers flock to Samos, Ephesus, and Miletus to undertake the building of the largest temples ever built in Greece and to construct such pioneering ventures of civic purpose as the aqueduct of Eupalinus in Samos.¹⁰¹ Jewelry and ivories were now produced by Ionian craftsmen, who were no longer in need of Oriental masters.¹⁰²

Our answer then to the question about the significance of Ionia in the Orientalizing period is this. Until the mid-turn of the Orientalizing period, Ionia was a relatively provincial part of Greece. It was out-

distanced by Rhodes and the Cyclades in the early phase of contacts with the Near East, and — perhaps because of the Cimmerian invasions — lagged behind Corinth, Athens, and Sparta. During the late Orientalizing period, a great surge brings the Ionians abreast with the other major regions of Greece. They forge ahead in the archaic period to become the cultural leaders of Greece before their wealth and their power, their luxuries and their hybris come to a dramatic fall under the assault of Persia.

In the foregoing observations, we have dealt primarily with the historical picture of Ionia as far as it can be drawn from archaeological evidence. We have sought to obtain results for the broad sequence of events and the relations with other areas of Greece, with Anatolia, and with the Near East; we have dealt inferentially with the standard of living, the expansion of crafts and trade, the achievements of construction and engineering, and the forms of social organization as far as they are expressed in terms of architecture. These might all be said to refer to “material” culture. Yet culture may be defined in a very different sense, if it is understood as an entity which includes the lasting intellectual, literary, and aesthetic achievements. Many competent studies have been devoted to the thinkers, poets, scientists, and historians of Ionia; but it may not be amiss to append some observations on the development of the Ionian art as it appears within the framework of the historic development, which we have sought to reconstruct.

Ancient art critics seem to have sensed that there was such a thing as an Ionian *character* in art of which they saw the exemplar in the Ionic order.¹⁰³ Modern scholars have tended for a while to exaggerate both the achievements and the influence of Ionian art. With a better knowledge of over-all advance of Greek art and of the contributions made by regional schools,¹⁰⁴ we are in a position to render a fairer verdict. We can see that there was such a thing as an Ionian character in art, but that it did not spring into life fully formed; one might rather say that it took the Ionians longer than the artists of the mainland and the Cyclades to achieve the complete and unmistakable expression of their artistic objectives.

Let us turn back to the Geometric period. We have already pointed out that in vase painting the earliest phase seems to depend substantially on the mainland, and that the later phase sees Ionia as participant in a general Eastern Greek style, in which it is not, however, the creative center (Figs. 3, 4, 5, 7). In architecture, there seems to be no substantial difference from the mainland, but then

we have little to go on. We are more fortunate in sculpture, where some instructive comparisons may be drawn. A proudly erect terracotta horse (Fig. 12) shows very clearly the strict Geometric interpretation of animals, as we know it on the Greek mainland. It is either an import or a very close imitation of an import and stands out among the terracottas found in the Heraeum of Samos.¹⁰⁵ Its authentically Samian counterpart (Fig. 13) is looser and bumpier in shape, heavier in proportions; but it makes up for these defections from the Geometric ideal by catching something of the colt's appealing awkwardness, by suggesting something of a wayward and stubborn animal's eye.¹⁰⁶ The famous group of a god wrestling with a monster was found in Olympia; like the fine animal group in Boston¹⁰⁷ it is surely a mainland creation.¹⁰⁸ Four verticals in the lower part of the group; a horizontal line carried across the centaur's body and the contestants' arms; two verticals to crown the composition — clearly, the artist was putting Geometric order first and the drama of the encounter has all but vanished. By contrast, the lion killer group found in Samos is confused and undisciplined in form, but it gives us something of the hero's businesslike dispatch, of the roaring threat of the monster, and of the eagerness of the attacking hound which is aiding the hero.¹⁰⁹ In speaking of vases, we have attributed similar differences to "barbarization," to the influence of Anatolian taste; but it should also be observed that there is a positive side. Because the "tyranny of compass and ruler" (H. Payne) is less pronounced, the artists have a more receptive attitude toward observation of reality, observation which flashes forth here and there within the limitations of a style that is in other hands rigidly unreal.

We have pointed out that in the Orientalizing period Ionian vase painting still remained a regional manifestation within a more comprehensive Eastern Greek style. We have observed, too, that the Ionians were not among the creative leaders who achieved one of the great expressions of Greek humanism — the mythological narrative. Just as the Geometric style was late in coming to Ionia, so there was a delay until it was overcome. Our three examples represent several stages of this process. The interesting parade of horsemen from Ephesus (Fig. 7) is still essentially Geometric — the riders are concealed behind neatly concentric shields.¹¹⁰ Heads and tails of horses are in the new "Orientalizing" outline technique. The stylistic phase is about the same as that of the "Analotos Painter" in Attica (700–675 B.C.).¹¹¹ The jungle warriors of the fragment from Smyrna (Fig. 8) reflect an advance toward a more pictorial style.¹¹² The

carefully spaced arrangement of the marching soldiers recalls the careful spacing of the marines on the ship plaque attributed to the "Analotos Painter," in whose work we also find some of the dotted "Oriental" garments and flowers;¹¹³ but shields with pictorial detail, such as those carried by the Smyrna warriors, may be paralleled in the next phase of Proto-Attic vase decoration, the so-called Black and White style.¹¹⁴

The fragment of a locally made scyphus-crater from Larisa-on-the-Hermus (Fig. 11) shows how the heritage of the Geometric silhouette still prevailed in provincial workshops after the middle of the seventh century. The formal means of drawing are somewhat similar to those of the advanced "Middle Proto-Attic" style (660-640 B.C.), but in this sketch of a sea voyage undertaken by contemporaries of the Phocaeen explorers we find some Eastern Greek traits. Thus the heads display peculiarly inquisitive, pointed noses and curiously sloping crania. The artist conveys with broad strokes something of the swiftness of the journey, hints through the expressive eyes at a sense of wonder at the strange things which the sailors will see; but his willowy figures lack that monumentality and largeness which an Attic draftsman of this time would bestow upon the major personages of his scenes.¹¹⁵

Ships of the exploring days are shown again on two remarkable Eastern Greek plates from the vicinity of Cnidus (Fig. 10a and 10b). Lower half is for a ship, upper half for an animal. This composition symbolizes very neatly the transitional phase from belated Geometric to the late Orientalizing "wild goat" style.¹¹⁶ The animal and the ship of the upper plate (Fig. 10a) are still in Geometric silhouette, but the animal has real bulk and its gait and posture are real, even if this reality has been attained through the imitation of a Near Eastern model. It is a forerunner of the ibexes and bulls of the "wild goat" style (Fig. 9). The lower plate (Fig. 10b) exhibits a thin form of the same Orientalizing guilloche which is sensuously and richly developed on the neck of a late seventh century jug from Smyrna (Fig. 9). Again the differences from the leading Greek wares are at least in part the result of provincial barbarization; even the shape of one of the plates (Fig. 10a) may be based on an Anatolian form.¹¹⁷ The leading Orientalizing styles of Greece reached their ultimate achievement by attaining a synthesis between the sense of order and structure, which they inherited from the Geometric style, and the new intoxicating richness of the Orientalizing world; as the examples from Smyrna and Knidos show (Figs. 8, 10), it is precisely the underlying

order that is weak in Eastern Greek drawing of the early Orientalizing period. The positive factors lie in a certain vivacity and an effect of exotic richness which was to be fully realized in the Late Orientalizing phase (Fig. 9).

Sculpture helps to recognize other positive achievements, in which one may sense the first stirrings of a purely Ionian mode. To be sure, the two early Orientalizing terracottas from Samos¹¹⁸ (Figs. 14, 15) are less clearly structured than the Cycladic or the mainland figurines of the same time, but they seem to show a desire to convey something individual and alive in their eager and irregular faces.¹¹⁹

Like the alphabet half a century earlier, the great inventions of monumental sculpture and architecture in stone spread to Ionia without perceptible delay. It is noteworthy, however, that all through the "Daedalic" period of the late seventh century and well into early archaic, these monumental works are closely connected with the sculpture of the Cyclades. We may well grant that large-scale stone sculpture in Ionia was fully as advanced technically as elsewhere in Greece,¹²⁰ but it did not yet convey any specifically Ionian ideal. The Ionic order in architecture, too, seems to have developed into its canonic form during the first half of the sixth century, with a lag of some fifty years compared to the development of the Doric order.¹²¹ And in vase painting, the Orientalizing "wild goat" manner drags on well into the archaic period, with the process of barbarization again clearly evident in the smaller or more provincial workshops.¹²² On the other hand, a number of objects in minor arts show that the period was one of preparation, that the Ionian attitude toward art was reaching ever clearer expression. Pursuing the same objective of individualized vitality which we have seen first approached in the Orientalizing terracottas from Samos (Figs. 14, 15), the painter of the fascinating vase from Myrrhina (Fig. 16) attains to a grotesque power unrivaled among the draftsmen of the mainland.¹²³ He is emphatic in making his bearded man follow a somatic type that departs from the ideals of mainland Greece; he is making an attempt to render the Ionian character.

The head from Myrrhina veers far toward the exotic component of the Ionian genius. When the synthesis is achieved in the age of Polycrates, it combines this talent for the emphatic assertion of the irregular and expressive traits with the structural order of the Greek tradition and with a luxurious, refined sense for the beauty of decorative pattern which may be traced all the way back to the Eastern Geometric style.¹²⁴ This "soft" poetic style enthralled Greek artists from Thasus

to Paestum. One might have difficulties trying to establish any parallelism of literature and art during the earlier phases of Ionian culture, but this lyric devotion to the evanescent, enigmatic charm of softly smiling maidens (Figs. 17-19) and tender-limbed boys¹²⁵ is shared alike by their unknown sculptors and by Anacreon.

There was more than rococo playfulness to this art. Something of the Ionian *historie*, of an eager, inquisitive attitude toward life breaks forth from such keen-eyed, intelligent faces, as those of the temple-maidens from Didyma (Fig. 18). The direct grasp of individuality, which was almost wild and unrestrained on the vase from Myrrhina (Fig. 16) is now softened, brought into more humanized reality. The extraordinary terracotta head (Fig. 20) found in Olympia seems to represent the ultimate achievement of an Ionian sculptor in this direction.¹²⁶ Altogether, the Ionian works of the late archaic period constitute a triumphant assertion of the Ionian character; these men and women seem to proclaim by their exotic beauty and quickened liveliness that they are "like only unto themselves" and different from all other Greeks.

For a brief span, Ionia had become the leader of Greece in art. There is reason to think that her sculptors were among the pioneers of the new Classical art, when the flowering of Ionia was cut short by the catastrophe of the Ionian rebellion. A powerfully moved torso from Miletus is as bold a venture in representation of motion as anything produced by sculptors trained on the mainland.¹²⁷ It reminds us of the fame enjoyed by Pythagoras of Samos for his revolutionary study of the *rhythmos*.¹²⁸ Ionian painters were apparently engaged in designing entirely new kinds of pictorial compositions, in which elaborate architectural and landscape elements served as backgrounds for display of multitudes of people — such as the crossing of the Bosphorus by the Persian army.¹²⁹ But Pythagoras of Samos became Pythagoras of Rhegion; he went to Southern Italy and many Ionian artists and intellectuals underwent similar transplantation. As Ionia's most talented sons scattered to other regions of Greece, Ionia sank once more to the role of a follower.

NOTES

ABBREVIATIONS

For the abbreviations of periodicals see *American Journal of Archaeology* 54 (1950) 269-271.

Akurgal, E., "Bayrakli, Erster Vorläufiger Bericht," *Zeitschrift der philosophischen Fakultät der Universität Ankara* 8 (1950).

AnSt = *Anatolian Studies, Journal of the British Institute of Archaeology at Ankara*.

Delos = *École Française d'Athènes, Exploration archéologique de Delos*, esp. Dugas, Charles and Rhomaïos, C., *Les vases préhelléniques et géométriques* (1934).

Desborough, V. R. d'A., *Protogeometric Pottery* (1952).

Karo, G., *Greek Personality in Archaic Sculpture* (1948).

Knoblauch, P., *Studien zur archaisch-griechischen Tonbildnerei in Kreta, Rhodos, Athen und Böotien* (1937).

Larisa = Schefold, K., *Larisa am Hermos*, esp. Vol. 3, *Die Kleinfunde* (1942).

Lorimer, H. L., *Homer and the Monuments* (1950).

Matz, F., *Geschichte der griechischen Kunst*, Vol. 1 (1949-).

Richter, G. M. A., *Archaic Greek Art against its Historical Background* (1949).

SCE = Swedish Cyprus Expedition.

Schrade, H., *Götter und Menschen Homers* (1948).

Weickert, C., "Ausgrabungen in Milet 1938," *Bericht über 6. internationalen Kongress für Archäologie Berlin* (1940) 325-332.

Wilamowitz, U., "Über die jonische Wanderung," *SBB* 1906, Phil. hist. Part 4, 59-77.

1. This article is a revised and enlarged version of a paper presented at a symposium of the American Philological Association in 1951. Two other papers concerned with Ionia were read on this occasion: E. A. Havelock's "Ionian Science in Search of Abstract Vocabulary" will be included in a book and Carl Roebuck's, "The Economic Development of Ionia," appears in *Classical Philology* 48 (1953) 9-16.

R. M. Cook, *JHS* 66 (1946) 67-98, and myself, *AJA* 49 (1945) 580 f., 52 (1948) 135-155, have pointed out the discrepancy between many of the current views and the archaeological evidence. I refer to these articles for earlier literature. For recent interpretations of archaeological evidence cf. Lorimer, 104 f.; Desborough, 296 ff. and map; T. J. Dunbabin, *JHS* 68 (1948) 39-69; J. Bérard, *Mémoires Acad. Inscriptions* 15 (1950) 1-66, and *Studies D. M. Robinson* 1 (1951) 135-159, struggles to uphold a chronology of the "heroic age" higher than that proposed by Eratosthenes.

I have to thank E. Akurgal, Walter Andrae, B. Ashmole, C. Blümel, R. J. Braidwood, J. M. Cook, O. Deubner, P. Devambez, G. Downey, D. L. Haynes, Josef Keil, E. Kunze, Machteld Mellink, Christine Mitchell, D. Ohly, H. Palmer, and C. C. Vermeule for help in securing information and photographs.

2. On the ecological method cf. G. E. Daniel, *Hundred Years of Archaeology* (2nd ed., 1950) 305 ff. There is good material in the publications on Ephesus, Miletus, and Priene. Cf. especially A. Philipson, "Das südliche Ionien," *Milet* 3, Part 5 (1936). C. J. Cadoux, *Ancient Smyrna* (1938). A helpful contribution toward archaeological history is Rüstem Duyuran, *Archaeological Map of Western Anatolia* (1952), kindly pointed out to me by H. Hoffmann.

3. Survey with map: K. Bittel, *Grundzüge der Vor-und Frühgeschichte Kleinasien* (2nd ed., 1950), Chapters 4-5. G. M. A. Hanfmann *AJA* 52 (1948) 148 ff. and *Studies D. M. Robinson* 1 (1951) 160-183. Akurgal, 52 ff. H. L.

Lorimer, *ABSA* 42 (1947) 87 ff., 120 f. The French excavations at Sinuri in Caria (to be published by P. Devambez), Midas City, and Claros (1951-) promise additional insights. Swedish excavations at Mylasa and Labranda have yielded important results for Caria. Surveys of Ionian and Aeolic sites have been undertaken by E. Akurgal and J. M. Cook. Akurgal, 52-54. J. M. Cook, *JHS* 70 (1950) 12.

4. Wilamowitz, 74.

5. Herodotus 1:146.

6. Non-Greek: J. M. Cook, *JHS* 70 (1950) 10. Greek: *Doliōnos emi qulichne* (with omega and koppa). H. Gallet de la Santerre, *BCH* 75 (1951) 128 f. J. M. Cook, *JHS* 71 (1951) 247, fig. 9; (...) *anetheke*, *JHS* 72 (1952) 103 f. *ILN* (February 28, 1953) the signature of a Milesian (?) potter Istrokles, seventh century.

7. A. W. Persson, *ILN*, Jan. 17 (1949) 85-87. I owe the reference to M. Mellink. A third tablet and a Carian seal: *AnSt* 1 (1951) 15. Another recent Carian inscription: L. Robert, *CRAI* (1946) 528. For earlier phases of Asiatic tongues: G. M. A. Hanfmann, *Studies D. M. Robinson* 1 (1950) 169. J. Friedrich, *Kleinasiatische Sprachdenkmäler* (1932). A. Götze, *Kleinasion* (1933). E. S. G. Robinson, *Studies W. H. Buckler* (1939) 267-275 (Carian), seventh to fifth century. Phrygian tablets at Persepolis: A. E. T. Olmstead, *A History of the Persian Empire* (1948) xi. The earliest Greek inscription found in Sardis is not much before 450 B.C., W. H. Buckler and D. M. Robinson, *Sardis* 7 (1931) no. 102.

8. A vivid reconstruction of a Phrygian castle by M. Akok in H. Z. Koşay, *Les fouilles de Pazarlı* (1941) pl. 36. Bittel points out that in Boğazköy the Phrygian settlement was considerably smaller than the Hittite — only the acropolis was fortified. Pazarlı and Boğazköy would correspond to medieval castles rather than towns, but Gordion seems to disclose a substantial, built-up urban area. Cf. K. Bittel, *Grundzüge* (1950) 81 ff., 130 f. Hanfmann, *AJA* 52 (1948) 149 ff. For Gordion cf. R. S. Young, *Archaeology* 3 (1950) 196 ff., *UPMB* 16 (1951) 1-19, fig. 1 (plan), *AnSt* 1 (1951) 11 ff.

9. For example, the marriage of Midas and a daughter of the Greek king of Kyme. Heraclides Ponticus, *FHG* 2 (1848) 216 (xi:3). On the mixed character of early Ionian aristocracy cf. D. W. S. Hunt, *JHS* 67 (1947) 70.

10. Religion: Pausanias, 7:2, 4, knew that Artemis of Ephesus and Apollo of Didyma had been worshipped in pre-Greek times. This is also generally assumed for the Hera of Samos. On Ephesus cf. R. D. Barnett, *JHS* 68 (1948) 20 f., with references to Picard. On the "Asiatic" Apollo, cf. M. P. Nilsson, *Geschichte der griechischen Religion* 1 (1941) 527 ff.; and on the alleged ability of Apollo to speak Carian, Ch. Picard, *RA* 39 (1952) 84-89. J. Keil, *Anatolian Studies W. M. Ramsay* (1923) 239-266, has shown that in Lydia native cults were influential well into Roman times. The march of Cybele and of the "Lydian" Bacchus through Greece seems to coincide with the period of intensive contacts of Lydians and Greeks under the early Mermnad dynasty.

Music: it may suffice to recall the Phrygian and Lydian modes and the Asiatic flutes. Terpander learned from the Lydians and Alcman came from Sardis. For a recent discussion, cf. Max Wegner, *Das Musikleben der Griechen* (1949) 48, 118-120, 135-143, 205, 227, who rightly surmises that a revolutionary development in music paralleled the revolution in art during the seventh century B.C.

Hymnic poetry: as E. A. Havelock reminds me, "Olen, a man of Lycia" was one of its "inventors." Herodotus 4:35. Pausanias 10:5, 8, and the discussion by J. Humbert, *Homère, Hymnes* (1936) 179 ff.

11. The following sequence has been established at the "Athena Settlement": cf. Weickert, fig. 1.

A. A Prehistoric "native" settlement is indicated by unstratified sherds and obsidian tools in a trench carried down to limestone rock. Weickert, 330, "Area 8." Despite Weickert's positive claim that Miletus (unlike Troy) was a Mycenaean settlement, K. Bittel hints that the natives may have remained in the majority during the Bronze Age. *Kleinasien und Byzanz = Istanbul For-schungen* 17 (1950) 24. A. von Gerkan, in the same volume, 38 ff., identifies the "Athena Settlement" as the Carian Anaktoria.

B. Level with Minoan and Early Mycenaean sherds; burned. Dated 1550-1425 B.C. by A. Furumark, *Opuscula Archaeologica* 6 (1950) 201 f. Aly, G. Kawerau, A. Rehm, and Theodor Wiegand *Das Delphinion in Milet* (1914) 407, argued that Minoan Cretans had founded Miletus (cf. Ephorus). A. von Gerkan states that the Prehistoric and archaic cult place of Apollo Delphinus was not in the same place as the fifth century sanctuary, which has been excavated. In his view both the sanctuary and the site of archaic Miletus are yet to be found. It follows that the Cretan-Minoan foundation cannot be identical with the "Athena Settlement." Helene Kantor, *AJA* 53 (1947) 104, suggested that the Mycenaeans were already in control of the "Athena Settlement" in this stage, but this is denied by Furumark.

C. Level with Middle Mycenaean sherds, 1425-1300 B.C. (Furumark); burned. Generally thought to be a Mycenaean settlement.

D. Level with Late Mycenaean sherds, 1300-1230 B.C. (Furumark). A gate, a street, and some rooms found in excavations 1904-1914, and a simple square house in 1938. A. von Gerkan, "Kalabaktepe, Athenatempel und Umgebung," *Milet* 1, Part 8 (1925) 4 f., 74 f., figs. 41 f., pl. 7. Weickert, 328.

12. It rests on Weickert's statement, 330, about a pit dug in "Area 7" at the western foundation of the fifth century temple of Athena: "It yielded clear levels. The transition from Protogeometric to Mycenaean was particularly *deutlich* . . . Higher up there were found Ionian sherds of the seventh and the sixth centuries." Cf. also Weickert, 325 f.: a little Protogeometric and Geometric found in the area of earlier excavations mixed with a considerable amount of Late Mycenaean. The unpublished pottery from this excavation in the Museum in Izmir may prove that there was a Submycenaean phase and therefore no gap between the end of the Mycenaean (1200 B.C., Furumark) and the Protogeometric (950 B.C.?) phases, but Weickert's statement and the two Protogeometric sherds illustrated in his report (Fig. 4, upper left, first and second row, after Weickert, pl. 25; cf. Desborough, 221, 323) do not suffice to prove this conclusion.

13. A. Furumark, *Opuscula Archaeologica* 6 (1950) 201.

14. For the location of Kilik Tepe cf. Baedeker, *Konstantinopel und Kleinasien* (1914), map opposite p. 409. Th. Wiegand, *AbhBerl*, Phil. hist. 1911, Suppl. Paper 1, 4-5. K. Bittel, *Kleinasatische Studien* (1942) 171. Among the objects found were handmade pots, polished celts, and obsidian tools.

15. Locations: *RE*, 2. Ser., 2 (1920) 2170. R. Heidenreich, *AM* 60-61 (1935-6) 169 f., 172 f. George Karo, 39. Lorimer, 435. In reply to my inquiry, Dr. D. Ohly, after consultation with Professor Ernst Buschor, assures me that no new

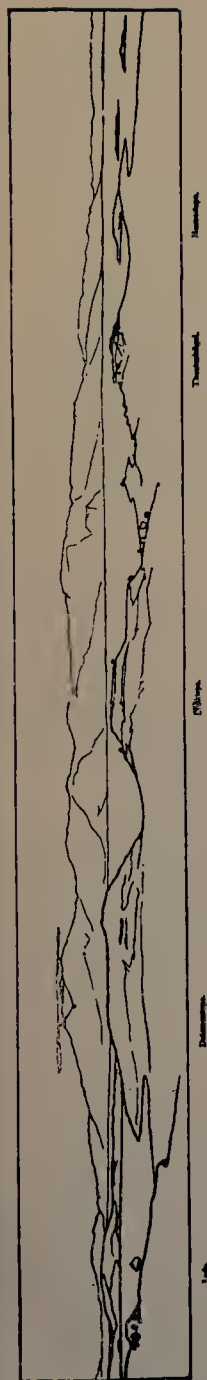


FIG. 1. *Milesian peninsula in antiquity. After Miletus I:8, p. 4.*



FIG. 2. *Location of trenches with archaic material (A), Ephesus. After JOAI 23 (1926), Beiblatt, fig. 43. By permission of Austrian Archaeological Institute.*



FIG. 3. Protogeometric and Geometric sherds from Miletus.
After Weickert, pl. 45.



FIG. 4. Geometric sherds from Ephesus. After JOAI 23
(1926), Beiblatt, fig. 44.

By permission of Austrian Archaeological Institute.



FIG. 5. Late Geometric dinos from
Old Smyrna.

Courtesy of M. Cook

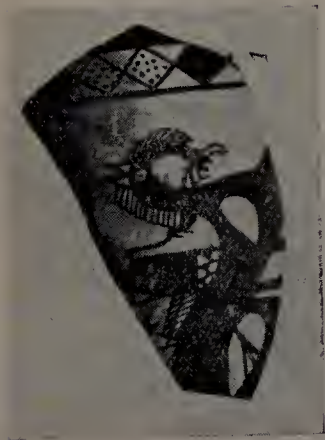


FIG. 6. Phrygian sherd from Boğazköy.
After MDOG 78, fig. 10.



FIG. 7. Sherd from Ephesus. After
JOAI 23 (1926), Beiblatt, fig. 45.

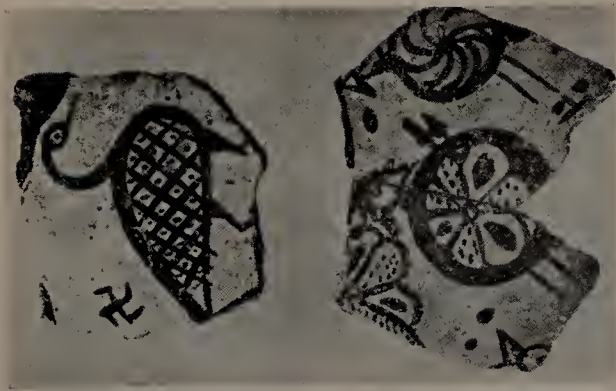


FIG. 8. Orientalizing sherds
from Old Smyrna. After
Akurgal, pl. 11 a.



FIG. 9. "Wild goat" style jug from Old Smyrna.
After Akurgal, pl. 10.



FIG. 10a,b. Plates from Dadia. British Museum
A. 719-720.

By permission of the Trustees of the British Museum.



FIG. 11. Sherd from Larisa.
After Schefold, *Larisa* 3,
pl. 30:10.



FIG. 12. *Terracotta horse from Samos (907).*

After photograph lent by D. Ohly.



FIG. 13. *Terracotta horse from Samos (1150).*

After photograph lent by D. Ohly.



FIG. 15. *Terracotta head from Samos (T. 396).*

After photograph lent by D. Ohly.



FIG. 14. *Terracotta figurine from Samos (2252).*

After photograph lent by D. Ohly.

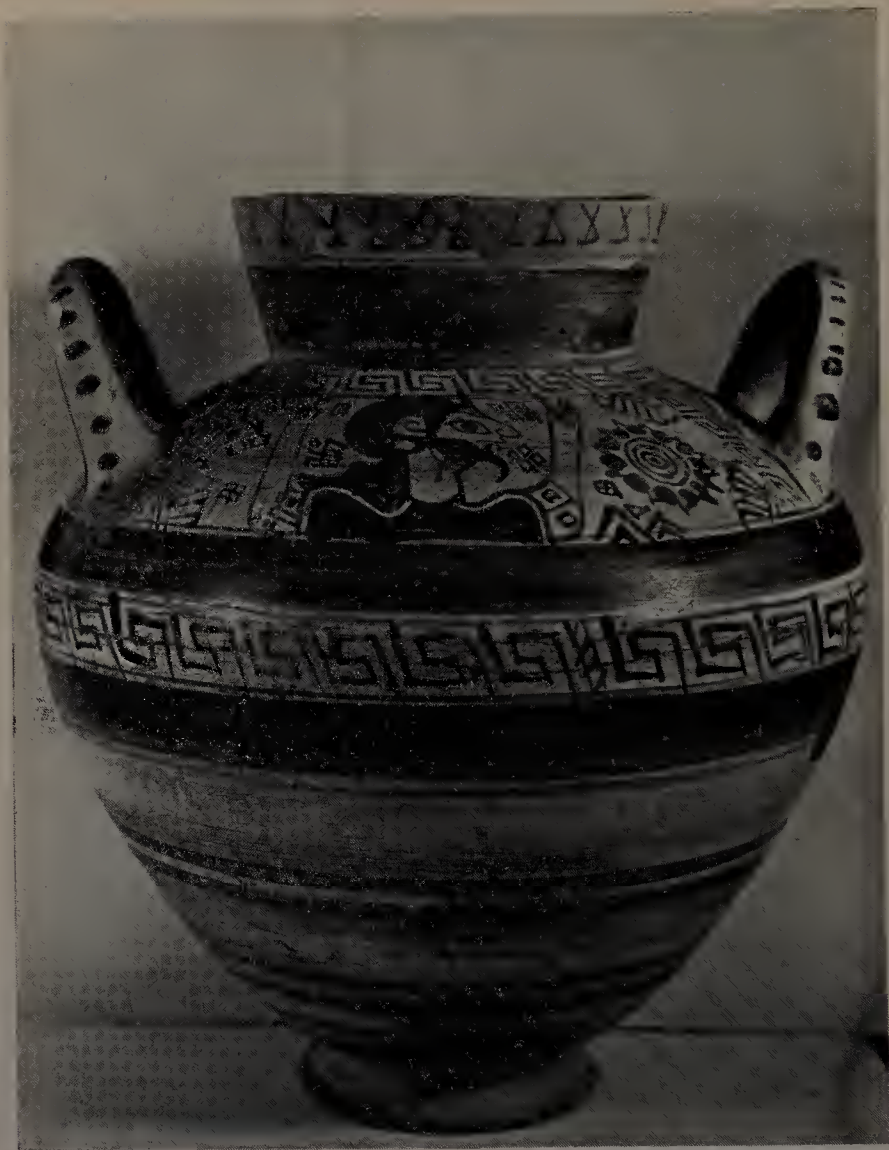


FIG. 16. *Vase from Myrrhina. Louvre.*

Photograph courtesy P. Devambez.



FIG. 17. *Priestess. From a column relief of the archaic temple at Didyma. After Th. Wiegand, Didyma 1, pl. 214.*



FIG. 18. *Head of a Milesian Girl. Berlin 1631. Profile View.*



FIG. 19. *Head of a Miletian Girl. Berlin 1631.*
Photograph courtesy Staatliche Museen, Berlin.



FIG. 20. *Terracotta Head from Olympia.*
Photograph courtesy German Archaeological Institute, Athens.

evidence has come to light. Dr. Ohly says: "It was generally assumed in the excavation since the appearance of Heidenreich's article that Samos was colonized by Greeks in the Late Mycenaean period." In a later communication (October 1952) he mentions that excavations have been resumed and some new soundings made "in the Prehistoric stratum north of the Temple."

W. Technau, *AM* 54 (1929) 7 f. following Wilamowitz suggested that Mycenaean Greeks may have settled at other sites on Samos which have yet to be identified.

16. The alleged Mycenaean chamber tomb in the Hera precinct is to be published by G. Welter. Cf. Ernst Buschor, *Gnomon* 3 (1927) 189, "late Mycenaean stirrup jars, pyxis." Technau, *loc. cit.*, "dürftiges Grab am Heraion." Heidenreich, *loc. cit.*, "Contained pyxis-like vases of local clay, painted, form like Sieveking-Hackl, pl. 2, no. 38," cf. 169 on other small fragments.

Tigani: in unstratified fill under the Early Christian basilica. W. Wrede, *AM* 60-61 (1935-6) 117 f., fig. 7, pl. 25 (pit). W. Buttler, same volume, 193 ff., pls. 68 f. Heidenreich, same volume, 169.

17. Furumark, *Opuscula Archaeologica* 6 (1950) 200 f. M. Mellink, to whom I owe the reference, concurs with Furumark. Buttler gave the correct date, even if he described the vases as Early Mycenaean, but Heidenreich, *AM* 60-61 (1935-6) 169 f. confused matters by describing the same vases from Tigani as Late Mycenaean. It is not clear whether any of them are identical with the two Mycenaean sherds found in a field at Tigani according to Technau, *AM* 54 (1929) 7.

18. Ernst Buschor and H. Schleif, *AM* 58 (1933) 150, 142, 157 ff. R. Eilmann, same volume, 57: "grobe mykenische Tassen...; Mycenaean goblet foot inv. 1173, intrusive in the deposit under Hekatompedos II." Heidenreich also cited a Mycenaean "idol," but this piece is denied to the Mycenaean in D. Ohly's careful investigation of terracottas from the Heraeum, *AM* 65 (1940) 76. Ohly states that there are no certain Mycenaean terracottas but believes that the earliest terracotta animals are not far in time from the end of the Mycenaean period. *AA* 53 (1938) 580 and 54 (1939) 266, quoted by Lorimer, are quite vague and general references to "Prehistoric buildings and Mycenaean and Greek levels."

19. Akurgal, 54-58, pls. Ia, 8. J. M. Cook, *ILN* Nov. 19 (1949) 775, *JHS* 67 (1947) 42, *JHS* 70 (1950) 12 f.

20. Smyrna: *JHS* 72 (1952) 105, fig. 10. Larisa, Phocaea: Hanfmann, *AJA* 52 (1948) 145. K. Bittel, *Kleinasien und Byzanz* (1950) 23 f. Chios: George Karo, *RE*, Suppl. vol. 6, 612. A. Furumark, *The Mycenaean Pottery, Classif.* (1941) 645, 650 adds a piece in Leiden "from Asia Minor."

21. A valuable survey of the Hittite evidence in O. R. Gurney, *The Hittites* (1952) 46-56. In those days, the claim of "overlordship" could be made on very slight grounds. Thus the temporary claim of the Hittite King to sovereignty over Millawanda might have been based on just one promise by one of Millawanda's rulers. K. Bittel, *Grundzüge* (1950) 70, thinks that the Ahhiyawa were a Greek power, which controlled Samos, Ionia, and Caria. Furumark and Kantor express confidence that major Mycenaean settlements will be found in Asia Minor.

22. Cf. p. 7 f., *infra*.

23. R. M. Cook, *JHS* 66 (1946) 67, n. 1, with literature. C. J. Cadoux, *Ancient Smyrna* (1938) 55 ff. W. B. Dinsmoor, *The Architecture of Ancient Greece*

(1950) 36. Bérard (n. 1, *supra*) uses the Ionian migration as an argument to advocate higher dates for the Dorian invasion and the fall of Troy. His endeavors convince me that all Greek dates before 650 B.C. are unsafe and that I should not have indulged even in a mild defense of Eratosthenes' date of the Trojan War, *AJA* 55 (1951) 360 f. A. R. Burn, *JHS* 70 (1950) 70-73, has some interesting remarks on methods which may have been used by Greek historians in the fifth century for calculation of early dates.

24. For example, H. T. Wade-Gery, *AJA* 52 (1948) 115-117.

25. *JHS* 72 (1952) 104.

26. J. M. Cook, *JHS* 72 (1952) 104, 106. Desborough, 214. For oval houses cf. the house model from Samos, Ernst Buschor, *AM* 55 (1930) 16 f., fig. 7 and the list of early Greek apsidal buildings in S. Markman, *Studies D. M. Robinson* 1 (1951) 261, n. 13. It is not clear whether the excavators still maintain that "the introduction of Greek pottery coincides with a belt of burnt layers," as in *JHS* 67 (1947) 42. I reserve judgment on the dates proposed by the excavators.

For the existence of a town plan with temple note the theory that the city of the Phaeacians in the Odyssey may reflect actual practices during the period of colonization, Schrader, 40. According to Akurgal, 76, and *ILN* (Feb. 28, 1953) 328 the town plan was regularized and the houses oriented north-south in the seventh century.

27. As in Athens in Protogeometric and early Geometric age. On the "acropolis" type, cf. Wycherley, *How the Greeks Built Cities* (1949) 5, 36; on the relation of palace and shrine, Schrader, 49 ff.

28. K. Schefold, *Larisa am Hermus* 1 and *Orient, Hellas und Rom* (1949) 81, pl. 2. The "acropolis" type was known in Bronze Age Anatolia (Troy) as well as in Mycenaean Greece. For Phrygia, cf. n. 8, *supra*. D. W. S. Hunt points up connections of fiefs with citadels (pyrgoi) *JHS* 67 (1947) 68-76.

29. *ABSA* 45 (1950) 16-21. The "urban" or "colonial" type of plan does not, of course, preclude an agricultural economy (*geomoroi*). It seems, however, to imply relative equality among citizens. C. J. Cadoux argues in *Ancient Smyrna* (1938) 62 that Smyrna like Kyme (and Phocaea) was originally ruled by kings, but this is conjectural.

30. A. von Gerkan, "Zur Lage des archaischen Milet," *Bericht über 6. Internationalen Kongress für Archäologie* (1940) 323 ff.

31. Carl Weickert, 330. Cf. Desborough, 221, and n. 11, *supra*.

32. A. von Gerkan, *Milet* 1, Part 8 (1925) 4 f., 29, 119, fig. 21, Beilage 1, pl. 3 (plan). *Milet* 2, Part 3 (1935) 9 ff. He dates the fortification wall in the late seventh century and the house foundations "as early as possible" because of their crude character.

33. Cf. n. 30, *supra*. Weickert, too, does not believe that Kalabak Tepe was the acropolis of the archaic Miletus. Kilik Tepe (n. 12a, *supra*) has been mentioned as a possibility.

34. *AJA* 52 (1948) 146.

35. Wilamowitz, 65. Perhaps at the southeast end of the Koressos (Bülbül Dag) ridge. Cf. Baedeker (1914) 374 and map.

36. *JOAI* 23 (1926) 251 ff., figs. 43 (map), 44-46 (vases). According to Hofrat Keil, the sherds are at the Österreichisches Archäologisches Institut, Vienna.

37. L. B. Holland, *Hesperia* 13 (1944) 91 ff., fig. 1 (locations); 139 ff., fig. 22 (house); 169 ff. (inscription).

38. Lorimer, 106, 348, n. 5. Cf. H. Goldman, *AJA* 27 (1923) 68. The dating is based on material concerning metal objects communicated to Lorimer by the excavator. Pottery records are lost. A closer dating can only be attained by a supplementary excavation.

39. Though Heidenreich, *AM* 60-61 (1935-6) 172, speaks of Delphi, he must mean Delos. Cf. M. P. Nilsson, *Geschichte griech. Rel.* 1 (1941) 356, 517. There, as Gallet de la Santerre shows, the sanctity of the "Hyperborean" monuments goes back far beyond the Mycenaean age (Middle Minoan). *RA* 29-30 (1948) = *Mélanges Picard* 1 (1949) 392 f.

40. Ernst Buschor, *AM* 58 (1933) 157 ff., figs. 1, 10, pls. 46 f., mentions "late and Submycenaean cups." D. Ohly argues that the earliest group of animal terracottas (Group "A") shows survival of Mycenaean traditions in form and technique. He dates them before 850 B.C. He furthermore suggests that fragments found below the pavement of Altar II must have been used in cult practices at Altar I; but lists only one such fragment of a "double-bull." Cf. *AM* 65 (1940) 82 f., 85, no. 426, pl. 54; 69 f., 76, 91 ff., esp. no. 482, pl. 52, other early figurines.

41. *AM* 58 (1933) 147, 160 ff., figs. 11, 12. A clear account in Karo, 39 ff. Cf. also C. Yavis, *Greek Altars* (1949) 89 f., 96 f., 118 ff. Finds: Ohly, *loc. cit.* 82 ff. R. Eilmann, *AM* 58 (1933), Beil. 18, 1 and 20, 2. For the "Hekatompedos I" temple, cf. Matz, 373, fig. 23 and H. Riemann, *Studies D. M. Robinson* 1 (1951) 296 f.

42. As Eilmann, *loc. cit.*, 141 f., remarks, the Geometric sequence of Samos cannot be judged until the pottery associated with the altars is fully published. The present chronology rests upon the data from the deposit under "Hekatompedos II." This deposit was fairly homogeneous. Most of the sherds were late Geometric and Subgeometric, but Orientalizing pieces like Eilmann, *loc. cit.*, Beil. 26:2-3 and 39:8, prove that the Protocorinthian aryballos of the deposit is not intrusive. As Orientalizing style was late in making itself felt in Samian pottery, the deposit ends shortly before 650 B.C. The "Hekatompedos II" temple then belongs to mid rather than early seventh century; and the dates of earlier structures have to be lowered correspondingly.

43. The oldest stone structure extant at the Artemisium, Basis "A" has been shown to date about 600 B.C. by P. Jacobsthal and E. S. G. Robinson, *JHS* 71 (1951) 85 ff., 156 ff. There is even less preserved at Didyma. Cf. Yavis, *Greek Altars* (1949) 98 f., (Ephesus), 208 f. (Didyma).

44. Pausanias 7:2, 4.

45. T. Macridy and Charles Picard, *BCH* 39 (1915) 33-52. Charles Picard, *Ephèse et Klaros* (1922) xxxvi ff. M. P. Nilsson, *Geschichte der griechischen Religion* 1 (1941) 514. *AnSt* 1 (1951) 17.

46. W. Lamb, *ABSA* 35 (1934-5) 138 ff., pls. 27, 29, fig. 1, speaks of tradition of worship "from the ninth century onwards." Desborough, 217, says that two or three sherds may be Protogeometric; but the bulk of the "Geometric Deposit" is surely of the eighth century.

47. Late Geometric graves have been found at Old Smyrna, *JHS* 72 (1952) 106. On the cemetery and tumuli cf. Akurgal, 79 ff. For Colophon, cf. n. 38, *supra*.

48. For the upper limit, I accept here the correlations of Mycenaean material and Near Eastern chronology as proposed by A. Furumark, *The Chronology of Mycenaean Pottery* (1941). For later discussions cf. *AJA* 55 (1951) 360 f., 364 f. Important correlations for Cycladic bowls from the Amuq will be published by G. F. Swift in his work on material from the Amuq excavations. For other data cf. Hanfmann, *AJA* 53 (1949) 223. The "absolute" date for Greek vases found at Tell Abu Hawam is put into question by B. Maisler, *BASOR* 124 (Dec. 1951) 121 ff., who denies that the city was destroyed by Sheshonk II. in 926 B.C.

49. Cycladic "Protogeometric" bowls, the so-called Ionic cups, and some undetermined Greek sherds can be shown to be earlier than 700 B.C. at Al Mina and Tarsus. Isolated sherds may be earlier still, but cannot be dated in "absolute" terms. Nothing useful has resulted for the major Greek Geometric wares of the mainland from any of the Near Eastern sites, though there are a few isolated sherds unpublished.

50. Desborough, 294 f.

51. Desborough also discusses the few other places where habitation may have been continuous from the Mycenaean to the Geometric ages. Desborough, 296 f., 301, 317 ff.

52. Desborough, 126 ff., 172 ff., 297, 302 f. For continuity in Delos cf. also H. Gallet de la Santerre, *Mélanges Charles Picard* (1949) 399, and J. Tréheux, *BCH* 61-62 (1947-8) 247 ff. Desborough's terminal date of 725 B.C. for Cycladic "Protogeometric" cups is too high. Tarsus provides a few examples after 700 B.C. For the possibility of continued occupation of Naxos, *JHS* 71 (1951) 294 f. and 72 (1952) 106. N. M. Kontoleon, *Praktika* 1950, 279.

53. Desborough, 215-221, 323.

54. J. M. Cook, *JHS* 72 (1952) 104, fig. 9; the earlier dating in *ILN* (Feb. 28, 1953) 329.

55. Desborough, 216.

56. Babylon: E. F. Schmidt, *AA* 56 (1941) 792 f., said that the earliest Greek sherds found in the palaces and houses of Babylon were Mycenaean; "dann reißt die Reihe über geometrische und korinthische Ware nicht mehr ab." Dr. O. Deubner had prepared a publication of this material, which was in the Pergamon Museum (Vorderasiatische Abteilung), Berlin. Dr. Deubner writes, in reply to my inquiry, that the Mycenaean and Geometric sherds were few "isolated pieces"; he has no access to the material. According to Dr. Walter Andrae, the proof of Dr. Deubner's contribution "is not available at present." Niniveh: R. W. H., *JHS* 52 (1932) 130. R. M. Cook, *JHS* 66 (1948) 83, footnote: "one Submycenaean, one Protogeometric" sherd; I do not know on what authority. Leonard Woolley, *Middle East Archaeology* (1949) mentions Protogeometric sherds from Al Mina. The Cycladic "Protogeometric" sherds from Al Mina discussed by M. Robertson, *JHS* 60 (1940) 2 ff., need not be earlier than the late eighth century; but there are earlier Greek sherds from Levels 9-10 in Antioch. Cf. *AJA* 53 (1949) 223. As G. F. Swift confirms, a fine Greek Protogeometric sherd was found in the Amuq (Antioch Plain).

57. Desborough places one small group of vases about 875 B.C. and thinks that Samos was settled, perhaps from the Cyclades, in Early Geometric times. Karo, 51 f., comments on the fact that Samian Geometric sets in fully developed. There are very few imported sherds. Presumably, a sizable number of colonists arrived together and brought a number of potters with them.

58. Samos: *RE*, 2nd Ser. 2 (1920) 2210, *s.v.* Samos. Homer: Joshua Whatmough, *AJA* 52 (1948) 48. Attic military and merchant marine was supposedly unimportant until Solon; but Attic seafaring seems to loom large for the Proto-geometric period. Athenians may have founded the abortive colony at Asarlik, Desborough, 220 f. For the interest in ships reflected on Attic vases of the eighth century B.C. cf. G. S. Kirk, *ABSA* 44 (1949) 144 ff., whose "artistic" explanation will hardly convince any art historians.

59. Bernhard Schweitzer, *AM* 43 (1918) 79. E. Pfuhl, *Malerei und Zeichnung der Griechen* (1923) 58 f. Desborough, *passim*. For a recent survey of Greek Geometric style, cf. Matz, 48 ff., esp. 71. For the Cypriote development and its relations to Greek pottery, E. Gjerstad, *SCE* 4, Part 2 (1948) 262 ff., 292 ff., 447 f. G. M. A. Hanfmann, *AJA* 55 (1951) 426 f.

60. For the Attic chronology and phases: P. Kahane, *AJA* 44 (1940) 464-482 and the summary by G. S. Kirk, *ABSA* 44 (1949) 93 f. R. S. Young seems to accept a compromise with Kahane's chronology: *Hesperia* 18 (1949) 283. For Corinth cf. S. S. Weinberg, *AJA* 45 (1941) 30-44, where the survival of the Geometric and the existence of an Aeginetan Geometric pottery are also discussed. *Id.*, *Corinth* 7, Part 1 (1943) and *Hesperia* 17 (1948) 204 ff., pls. 71, 75. Weinberg dates Corinthian Early Geometric *ca.* 900-800 B.C., but his "Late Geometric," 800-750 B.C., is in the same tradition; a real change does not occur until the middle of the eighth century. His "Linear Geometric" (750-) thus corresponds to Late Geometric elsewhere and his "Late Geometric" to Middle Geometric in other regions.

61. Desborough, 224, 227, 232, 303, pl. 30. The major phases of Rhodian Geometric were first defined by Charles Dugas, *BCH* 36 (1912) 495-522 and elaborated by Chr. Blinkenberg, *Lindos* 1 (1931) 231 ff. (Phases II-IV), pls. 33 f. I have also used an unpublished paper on Rhodian Geometric by Nanette Rodney.

62. For the Protogeometric manner, cf. Desborough, 302 f. J. K. Brock, *ABSA* 44 (1949) 74-79, only a few remarks on Geometric. Charles Dugas and C. Rhomaïos, *Délos* 15 (1934) 12 ff. I should call Dugas' "rectilinear" vases of group "Aa" Early Geometric. *Op. cit.* 15 f., nos. 45-54, pls. 12-14 and 48 f., nos. 32 ff., pl. 28. On the scarcity of Early Geometric in the Southern Cyclades cf. Desborough, 215, 304, and J. K. Brock, *loc. cit.*, 53 ff. (Siphnos).

63. The excavators hint that the Protogeometric style may have remained in use longer than in Athens; consequently, the Geometric sequence, too, may show a lag.

64. Miletus: black-glaze fragments with "turret meander," cf. Attic examples, which however look better and earlier. Desborough, pl. 15, transition to Geometric. R. S. Young, *Hesperia* 18 (1949) 290 f., pl. 68: 2, 4, Early Geometric. Samos: W. Technau, *AM* 54 (1929) 12 f., Beilage 4:1, 2, 4, 5. R. Eilmann, *AM* 58 (1933) 72, fig. 22, Beilage 32:11. Cf. M. Robertson, *JHS* 60 (1940) 2, fig. 1: "1", described as Cycladic and for Severe Attic examples Kahane, *AJA* 44 (1940) pls. 21:4 and 22:4.

It is possible though not certain that "thin-lined" craters and scyphi from Samos may be Early Geometric. Technau, *loc. cit.*, Beil. 5 and 6:2, 3, 4, fig. 10, lower left and fig. 11. Eilmann, *loc. cit.*, 62 f., figs. 8c, 9b-c; Beilage 20:22. Cf. *Délos* 15, pl. 30, no. 60 and pl. 31, no. 61. *ABSA* 44 (1949) 45, pl. 15:2, there dated in the seventh century.

65. Our Fig. 4, lower left, is Orientalizing; lower right is a common type of scyphus, late eighth or early seventh century, cf. *AM* 58 (1933), pl. 21:20, Samos. Josef Keil, *JOAI*, Beiblatt 23 (1926) 254, fig. 46, illustrates a cup paralleled on Samos. Eilmann, *loc. cit.*, 58, fig. 4. I suspect the inspiration may be "barbarian" rather than Submycenaean as suggested by Eilmann.

66. Epidaurus, whence some settlers came to Samos, may yield a sequence from Submycenaean to Geometric. Cf. *JHS* 71 (1951) 241. K. Gebauer, *AA* 53 (1938) 559 and 54 (1939) 287 ff. I. Papademetrios, *Praktika* 1950, 197 ff. The region of Pylos and Colophon would make a fascinating comparison, if we had pottery material from Colophon. Cf. for the historical possibilities H. T. Wade-Gery, *AJA* 52 (1948) 117.

67. In Athens, this phase is dated by Kahane *ca.* 800-750 B.C. In Rhodes, however, Blinkenberg's "Advanced Style" shows no clear-cut change prior to 700 B.C. Cf. *Lindos* 1 (1931) 242, nos. 845-866, pls. 35-37.

68. Technau, *AM* 54 (1929) 15 f., figs. 7-8, pl. 2. Eilmann, *AM* 58 (1933) 92 ff., figs. 9a, 26a, 40 f., pl. 1, Beilage 28 f. Argive: A. Frickenhaus, *Tiryns* 1 (1912) pls. 14 and 20:3. Cf. Ernst Buschor, *AM* 54 (1929) 153 f., fig. 7 (Naxos). As a matter of fact, most of the Samian vases with human and large animal figures seem to fall into the Late Geometric (750-700 B.C.) phase and some may even belong in the seventh century. The "prothesis vase," for instance, is perhaps related to Cycladic "Ad" group, which is Subgeometric (700-675 B.C.). Cf. J. K. Brock, *ABSA* 44 (1949) 19 ff., pl. 6:1-2 and Buschor, *loc. cit.*, 159 f., fig. 12.

69. In Corinth, a "Potters' Quarter" comes into being in the Late Geometric period, cf. A. N. Stillwell, *Corinth* 15, Part 1 (1948) 11.

70. S. Casson, "The Modern Pottery Trade in the Aegean," *Antiquity* 100 (December, 1951) 187 ff.

71. Rhodes: Chr. Blinkenberg, *Lindos* 1 (1931), pls. 35-37. Luciano Laurenzi, *Clara Rhodos* 8 (1936) 172, fig. 161, Tomb 51. Chios: W. Lamb, *ABSA* 35 (1934-5) 157 ff., pls. 34 f. Samos: Technau, *AM* 54 (1929) 9 ff., figs. 1-3, 10-11, Beilage 1:3. Eilmann, *AM* 58 (1933) 60 ff., figs. 8 f., 14 f., 17 f., 20 f., 26 f., 45; photographs must be consulted, as the drawings seem to be much tidier than the originals. Technau rightly surmised that there was Rhodian influence upon Samos. I do not see how the situation can be reversed, as Schefold, *JDAI* 57 (1942) 124 ff., would do. Some sherds in this general style are assigned to Kyme by K. Schefold, *Larisa* 3 (1942) 170, fig. 84a, pl. 57.

72. E. Gjerstad, *SCE* 4, Part 2 (1948) 447, 465.

73. E. Pfuhl, *Malerei und Zeichnung der Griechen* (1923) 93 f. Eilmann, *AM* 58 (1933) 54 f., 73 f. Schefold, *Larisa* 3 (1942) 192 ff. Akurgal, 58 ff., 84 ff.

74. Akurgal makes a good case for plates and kettles with half-spool handles; I suspect that metal basins and cauldrons were also imitated. The astounding number of fibulae found recently in one of the tumuli of Gordion seems to show that the so-called "Eastern Greek" fibulae may be a Phrygian type.

75. Eilmann, *AM* 58 (1933) 54. A striking case are vases on which figures are surrounded by irregularly placed circles. Greek: Technau, *AM* 54 (1929) 14, 17, fig. 5, Beilage 8:1-3 and a sherd in Bryn Mawr, no. P.724. Phrygian: *SBB*, Phil. hist. 1935, No. 1, pl. 18:9, 11.

76. Boğazköy sherd, Fig. 6 = H. Otto, *MDOG* 78 (Mai, 1940) 58 f., interpreted as a charioteer. Black and red on white. For the horse cf. also J. K.

Brock, *ABSA* 44 (1949) 36, pl. 13:1, Naxian? Other examples of barbarization from the seventh century Phrygian level at Boğazköy: Otto, *loc. cit.*, "Rhodian tree," fig. 15:3 and warrior with shield, 56 f., fig. 14, after a Greek model somewhat earlier than our Fig. 8. On Asiatic Geometric styles cf. G. M. A. Hanfmann, *Studies D. M. Robinson* 1 (1951) 176 f.

77. It is well represented at Al Mina and to a degree at Tarsus in levels datable after 700 B.C. Cf. M. Robertson, *JHS* 60 (1940) 13 f., fig. 7, "Sub-geometric."

78. Lorimer, 433 ff. (especially "Megaron B," Thermon). Matz, 94 f. H. Riemann, *Studies D. M. Robinson* 1 (1951) 296 f., n. 4a, believes that the long narrow temples originated in the Protogeometric period because of inability of the builders to bridge wide spans. Schrade argues that they express a change in the attitude toward gods (39 ff., 49 ff.).

79. Wilamowitz remarks that nowhere did the Greek speech show more barbarian influences than at Ephesus.

80. Although American scholars are well aware of the mobility of early settlers in their own country, yet it is often argued that considerable time must have passed between the establishment of Ionian cities and their colonies. Probabilities seem to point the other way. Once seafaring and land-taking had become a common practice, it must have happened that as soon as land was hard to find or take, a number of farmers would take to ships and explore the coasts for favorable places.

81. T. J. Dunbabin, *JHS* 68 (1948) 66.

82. Near East: *AJA* 52 (1948) 142 f. and 53 (1949) 223. R. M. Cook, *JHS* 66 (1946) 82 ff. On "Cycladic" in the Near East, Desborough, 179 ff., 303 who locates the production of "Cycladic bowls" in the "Northern Cyclades," with Delos "the busiest port." P. J. Riis, *Hama, Cimitières à cremation* (1948) 113 f., fig. 134. Gjerstad, *SCE* 4, Part 2 (1948) 274 f.

83. Afif Erzen, *Kilikien bis zum Ende der Perserherrschaft* (1940) 60 ff. The first preserved mention is under Sargon, about 711 B.C. The Yavan live in the middle of the sea—which fits islanders better than Ionians of the mainland. Note also that the Cycladic bowls at Hama were found in the level destroyed by Sargon.

84. Recent list: Akurgal, 60 f., pl. A.1 (Ankara), pl. 9a. Add *ABSA* 44 (1949) 50, pl. 15:19, 22, 23, 26, Siphnos. For export of Rhodian terracottas and relief jars over much the same area, cf. Knoblauch, 54. F. Courby, *Les vases grecques à reliefs* (1922) 54 ff. Chr. Blinkenberg, *Lindos* 1 (1931) 255 ff. D. Feytmans, *BCH* 74 (1950), 139, 179 f., lists "genuine" Rhodian relief pithoi from Asia Minor.

85. Al Mina: Robertson, *JHS* 60 (1940) 14 f., fig. 8:f-k. Levels 5-7 (after 700 B.C.) "but none in the lower levels." Tarsus: A few early examples of bird bowls and a bird jug earlier than Assyrian destruction of 696 B.C. The bulk found in the Assyrian levels; the latest bird cups occurred with fully developed "wild goat" style fragments, some in a floor level dated by an Assyrian tablet of 636 B.C. Istria: F. M. Lambrino, *Les vases archaïques d'Istria* (1938), Chapter 4, 650 B.C. R. M. Cook, *JHS* 59 (1939) 148 f. places the foundation of Istria as late as 610 B.C.

86. Deinos: J. M. Cook, *JHS* 71 (1951) 248 f., fig. 8. H. Gallet de la Santerre, *BCH* 75 (1951) 128 f., fig. 21. From the early seventh century temple. On

Terpander cf. the recent discussion by Max Wegner, *Das Musikleben der Griechen* (1949) 48, 141, 227, with literature. On the Mycenaean eight-string lyre, Lorimer, 456.

87. Horsemen, warriors: nn. 110, 114, *infra*.

88. K. Schefold, *JDAI* 57 (1942) 129 f., figs. 1-2. C. Torr, *RA* 1894, Part 2, 26 f., figs. 14-15. British Museum. A. 719: Very pale orange clay, very pale buff slip. Paint fired red. Back, red with streaks of black. Torr's drawing (before restoration) shows the head of the animal (bull?). A. 720: Same clay and slip. Paint fired red and brown. Slip over entire back. G. Downey kindly secured photographs from Schefold's illustrations, B. Ashmole, D. E. L. Haynes, and C. C. Vermeule supplied the notes on the originals.

The plates came "from an ancient sanctuary" at Dacha or Dadia, which is named as provenance of Rhodian pithos reliefs and Cypriote figurines. F. Dümmeler, *AM* 21 (1896) 230, pl. 6 and E. Gjerstad, *SCE* 4, Part 2 (1948) 332, fig. 52. J. M. Cook identifies Dacha as Old Knidos, *ABSA* 47 (1952) 175, 202.

89. J. M. Cook, *ILN* (Nov. 19, 1949) 775. *JHS* 70 (1950) 10 f., figs. 7 and 71 (1951) 247. Akurgal, 76 and *ILN* (Feb. 28, 1953) 328, fig. 9. Was Smyrna rebuilt by the Colophonians after they had captured the city?

90. J. M. Cook, *JHS* 72 (1952) 105. *AnSt* 1 (1951) 16.

91. J. M. Cook, *loc. cit.*, 105 f., figs. 11-12. *ILN* (Feb. 28, 1953) 329, figs. 6, 10.

92. Karo, 42 ("Hekatompedos II"). Matz, 372, figs. 23, 25.

93. W. Lamb, *ABSA* 35 (1934-5) 139 f.

94. "Base A." The dimensions show that the structure was not more than a chapel. C. Yavis, *Greek Altars* (1949) 98, describes it as enclosure for a sacred tree with a special platform for a xoanon or an officiating priest. Matz, 375, believes that altar, chapel, precinct survived well into the sixth century as an open-air cult. For the date of "Base A" cf. P. F. Jacobsthal and E. S. G. Robinson, *JHS* 71 (1951) 85 ff. and 156 ff.

95. Samos: R. D. Barnett, *JHS* 68 (1948) 3 f., 6, 17 ff., pls. 1b, 3b, believes that Phoenician craftsmen may have worked in Samos. Assyrian bronze: E. Kunze, *Kretische Bronzereliefs* (1931), Beilage 5a-b. Late Hittite lion: E. Akurgal, *Späthethitische Bildkunst* (1949) 75, pl. 37. Smyrna: Akurgal (*Bericht*), 82 f., 91 ff. *ILN* (Feb. 28, 1953) 329, figs. 1 and 2. Chios: W. Lamb and A. W. Shorter, *ABSA* 35 (1934-5) 153 ff., 163 f., pls. 32 f. (scarabs, ivory, fayence).

96. D. Ohly, *AM* 65 (1940) 55-65, pls. 35-45. E. Gjerstad, *SCE* 4, Part 2, 332 ff. states that there was a Cypriote factory on Samos. He lists other Cypriote sculptures from Ephesus and Smyrna. Knoblauch, 108 f., suggests that the use of mat colors and molds was adopted under Cypriote influence.

97. The life-size terracotta image of the late seventh century temple in Smyrna is said to resemble Cypriote work. *AnSt* 1 (1951) 16, also for Cypriote statuettes. H. Gallet de la Santerre, *BCH* 75 (1951) 128 f. J. M. Cook, *JHS* 71 (1951) 249. For Eastern "ivorists" at Ephesus, cf. P. F. Jacobsthal, *JHS* 71 (1951) 93 and Barnett, *loc. cit.*, 18 f.

98. The rise of the "wild goat" style coincides with the period of the greatest Assyrian influence on Cyprus, in Cilicia, and in North Syria. If we had more paintings and reliefs (as well as textiles) from the palaces of the Assyrian governors (as at Tell Tayinaat in the Antioch Plain and at Til Barsib on the Euphrates), we should probably see this Assyrian inspiration more clearly. As-

syrian artists of the seventh century established a curiously objective way of rendering animals as innocent and appealing creatures, whose characteristic behavior and expressions are keenly observed. These are very different animals from the demoniac and ferocious creatures of the "Late Hittite" art. For the Eastern Greek animal style cf. R. M. Cook, *JHS* 66 (1946) 93 f. and *ABSA* 44 (1949) 154-161 ("Chiot"). Samos: R. Eilmann, *AM* 53 (1933) 83 ff., figs. 30-32; pp. 135 f., fig. 86, pls. 2 f., Beilage 43:8. Smyrna: Akurgal, 63 f., 71 f., with references. He does not commit himself definitely on the question of a local factory. *ILN* (Feb. 28, 1953) 329, fig. 3.

99. "The Economic Development of Ionia," *CP*. 48 (1953) 9-16.

100. E. S. G. Robinson, *JHS* 71 (1951) 156 ff.

101. Sculpture: Ernst Buschor, *Altsamische Standbilder* (1934) 8 ff. Karo, 195-223. Richter, 102 ff. W. B. Dinsmoor, *The Architecture of Ancient Greece* (3d edition, 1950) 118, 123 ff.

Theodorus and Rhoikos, engineers, architects, and sculptors, may have been Ionians. Chersiphron and Metagenes came from Crete; Eupalinus from Megara. The importance of this circle for engineering and for architectural theory is comparable to the importance of encyclopaedic Florentine architects like Brunelleschi and Alberti. The manner in which these men adopted the mathematical, geometric, and technological knowledge of Egypt and the Near East and advanced toward a Greek theory of architecture is of considerable interest for history of science. Cf. B. Farrington, *Greek Science* 1 (1949) 39 f., who pertinently recalls that Pythagoras may have been active in the same circle. On the political background cf. M. E. White, *AJA* 55 (1951) 151.

102. P. F. Jacobsthal, *JHS* 71 (1951) 85 ff., suggests that the school of ivory carvers at Ephesus was Hellenized in the early sixth century. Georg Lippold, *Handbuch der Archäologie* 5 (1950) 64, assigns fragments of chryselephantine statues in Delphi to an Ionian school.

103. Vitruvius 4:1, 4-8, tells the famous story that the Ionians built the Panionion of Apollo in Doric order, then a temple to Artemis in Ionic, taking the proportions for the former from a strong man, for the latter from a graceful woman. Despite modern doubts Vitruvius or his source may be right about a Doric Panionion. We do not know what the order of Eastern Greek temples was before the Ionic order was perfected. The French have found traces of a Doric phase in the temple of Apollo at Klaros. *AnSt* 1 (1951) 17.

Vitruvius' comparison of temple order and man is an elaboration of a theory, which linked the human figure, god, and temple. It is not impossible that the symbolism goes back to the circle of Ionian architects in Samos (Theodorus, Rhoikos, Eupalinus) who may have combined an Egyptian theory of temple as an image of god with a Pythagorean theory about the proportions underlying the human figure. On the possibility of equating temple and human figure in Egypt cf. the otherwise speculative book by Schwaller de Lubicz, *Le Temple dans l'Homme* (1949) pointed out to me by B. V. Bothmer. On the theories of Vitruvius, E. Pernice in K. Thieme and F. Becker, *Allgemeines Lexikon der bildenden Künstler* 34 (1940) 434 f., on the symbolism involved R. Wittkower, *Architectural Principles in the Age of Humanism* (1949) 13, 21, 89.

104. The most determined attempt to "regionalize" Greek sculpture was made by E. Langlotz, *Frühgriechische Bildhauerschulen* (1927). A similar method is followed by Lippold (n. 102, *supra*). Conversely, G. M. A. Richter has empha-

sized the rapid expansion of monumental sculpture and the uniformity of artistic advance throughout Greece in *Kouroi* (1946) 46. Her position seems to be somewhat modified toward a greater recognition of regional characteristics in *Archaic Art* (1949) xxii ff.

105. D. Ohly, *AM* 65 (1940) 100 f., pl. 57, no. 907. Ohly (p. 100, n. 1) states that another horse (*loc. cit.*, pl. 58, no. 448) may be Attic import. He assigns both horses to the late Geometric period.

106. Ohly, *loc. cit.*, pl. 58, no. 1150.

107. R. Hampe, *Frühe griechische Sagenbilder* (1936) 43, pl. 30. R. Segall, *BMFA* 51 (1943) 75, fig. 8, from Thebes.

108. Hampe, *op. cit.*, 32, pl. 30. Karo, 19 f., pl. 1. Matz, 83, pl. 27a. Buffalo, Albright Art Gallery, *Masterbronzes* (1937), no. 62, with bibliography. According to Ernst Buschor, *AJA* 38 (1934) 129 f., Zeus fighting Typhon, according to Karo, Herakles and Pholos.

109. Karo, 23 ff. Hampe, *op. cit.*, 34, pl. 30. Matz, 83 f., pl. 32b.

110. Josef Keil, *JOAI* 23 (1926) Beiblatt, 251 ff., fig. 45. From exploratory trenches in the area of the old city. For horsemen cf. G. M. A. Hanfmann, *AJA* 49 (1945) 575 ff. K. Schefold, *Larisa* 3 (1942) 100 ff., pl. 43.

111. J. M. Cook, *ABSA* 35 (1934-5) 173, pl. 41.

112. Akurgal, 61, 64, pl. 11a. Like the "dotted goose" in Fig. 8, the warrior processions were imitated in Phrygia. Cf. K. Bittel, *SBB* (1935) No. 1, pl. 17:10, noted by Akurgal and H. Otto, *MDOG* 78 (1940) 57, fig. 14, in a level with a Protocorinthian lekythos of mid-seventh century, Otto, fig. 10:6.

113. J. M. Cook, *loc. cit.*, pls. 40-42. G. S. Kirk, *ABSA* 44 (1949) 119, fig. 7. Matz, 292, pl. 193.

114. J. M. Cook, *loc. cit.*, 186 f., 191, pl. 52.

115. Schefold, *Larisa* 3 (1942) 78, pl. 30:10-11. The large man may be the captain or the steersman. I wonder, if the striped object might not be a sail. Cf. G. S. Kirk, *BSA* 44 (1949) 131 f. Schefold dates the sherd about 630 B.C. For the drawing of the eyes cf. J. M. Cook, *ABSA* 35 (1934-5) 189, 195 ff., pls. 53, 55, 58.

116. *JDAI* 57 (1942) 129 f., figs. 1-2. British Museum, nos. A. 719 and 720. On the change from Subgeometric to "wild goat" style cf. M. Robertson, *JHS* 60 (1940) 13 f.

117. Fig. 10a, with half-spool handles.

118. Figs. 14-15: D. Ohly, *AM* 66 (1941) pl. 22, no. 393. Matz, 165, pl. 75b, dates this figurine about 700 B.C. Fig. 15: Ohly, *loc. cit.*, pl. 14, no. 396. Matz, 165, pl. 36.

119. Ohly, whose article was unavailable to me, places the head Fig. 15, around the middle of the eighth century. It seems to me to belong to the formative period of monumental style in the second quarter of the seventh century. Cf. Matz, 298 ff., pls. 205, 209-212, and especially, 152, pl. 58a.

120. G. M. A. Richter, *Kouroi* (1942) 43 ff. Karo, 43 ff., 87 ff., 105 f., 180 ff., 196 ff., is, however, emphatic in asserting that little trace of locally produced Daedalic and Early Archaic large-scale sculpture has been found in Ionia. U. Jantzen, *Festschrift für Hans Jantzen* (1951) 26-30 claims metallurgical leadership in bronze sculpture for Samos. The main point is that even objects

of minor arts (ivories) show dependence on mainland and Cycladic styles. Knoblauch, 33 ff., makes it clear that Corinth and Rhodes were leading in terracotta production.

121. Similar conclusion in Matz, 378. For the material cf. W. B. Dinsmoor, *Architecture of Ancient Greece* (1950) 123 ff. Add the new capital from Smyrna, *JHS* 72 (1952) 105, pl. 6:3.

122. Larisa provides good examples, but there are many other local factories. Schefold, *Larisa* 3 (1942) 58, places the latest animal frieze vases around 525 B.C. Characteristically, much of the Ionian vase-painting in the first half of the sixth century depends on Corinthian black-figure. Schefold, *op. cit.*, 195, Akurgal, 68 ff., 73.

123. A. Rayet, *BCH* 8 (1884) 509-514, pl. 7 (color). *Clara Rhodos* 6-7, 209. Schefold, *op. cit.*, dates it "later than 630 B.C." It is surely not earlier than 600 B.C. I owe the photograph to the kindness of P. Devambez.

124. Cf. p. 13, *supra*. The maturity of Ionian style in terracotta figurines is placed by Knoblauch, 109 f. as early as 580-570 B.C.

125. Fig. 17: Priestess from a columna caelata, archaic temple of Apollo at Didyma. Carl Weickert, in Theodor Wiegand, *Didyma* 1 (1941) 123, 196 f., nos. 724-726, pl. 214. G. Bruns, *Kleinasien und Byzanz* (1950) 30-34. Figs. 19-20: Head of girl from Miletus. Berlin, no. 1631. Theodor Wiegand, *Antike Denkmäler* 3, 51, fig. 8. Karo, 215, pl. 17. Richter, 109, figs. 180 f. Other examples of "soft style" including a charming bronze boy, Karo, 208 ff. Ernst Buschor, *Altisamische Standbilder* (1934).

126. Richter, 190, figs. 289-290. The head is assigned to a sphinx acroterion from the Treasury of Gela. It has been compared to a sherd, which is Eastern Greek (Beazley); and is itself Eastern Greek.

127. Richter, 170 f., fig. 294.

128. Diogenes Laertius 8:46. Bernhard Schweitzer, *Xenokrates von Athen* (1932) 11 f. Charles Picard, *Manuel d'archéologie grecque* 2 (1939) 111-124.

129. Mandrocles, who constructed the bridge for Dareios, apparently painted himself the picture which he gave to the Hera of Samos. Herodotus 4:88. Calliphon of Samos painted the Homeric battle at the ships for Artemis at Ephesus. Pausanias 5:19 and 10:26,6. I believe that Assyrian narrative tradition was continued in Persian paintings and textiles; the Ionian painters may have derived their inspiration for topographical and panoramic painting (cf. Trysa and Xanthus reliefs) from this source. For topographic paintings of cities cf. P. F. Jacobsthal, *JHS* 58 (1938) 212 ff. Ship scene on an Achaemenid seal (tag) found in Persepolis, E. F. Schmidt, *OIC* 21 (1939) 43, fig. 24.

PLATONISM AND ITS CRITICS¹

BY WILLIAM CHASE GREENE

I

PLATO wrote in his time, but not only for his time. Any real appraisal of Platonism must therefore consider its fortunes in modern times and its contemporary validity. The study of Plato by classical philologists has its importance, especially when they have been concerned to explore the content and meaning of the Dialogues; but Plato was not writing for them and their students alone, but for philosophers and men of affairs, for scientists and poets and men of religion. Classical students of Plato, however, have too seldom been aware of the criticism of their author by modern philosophers, while even excellent modern philosophers are too rarely acquainted with the results of the philological study of Plato, or are even able to read him in his own language.

To speak of "Platonists," we may observe, with Stewart and Nottopoulos, may mean one or more of several things: the direct and consciously imitative Platonizers; the more independent interpreters of the Platonic tradition; and those natural, possibly even unconscious, Platonists whose attitudes may resemble those of Plato.² It is in this last sense that Platonism may be described simply as philosophy itself, in that all later thought has dealt primarily with the problems that Plato envisaged. The Dialogues are final, as works of art: as the record of a great mind, they are stepping-stones in a continuing process. This is what Whitehead, whose own philosophy owed much to the *Timaeus*, meant when he wrote the oft-quoted remark: "The safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato,"³ and when he defined the achievement of modern philosophers as endeavors to discern "analogous elements" in reality to those divined by Plato.⁴ So we must ask presently how far the Plato of the Dialogues and the students of modern philosophy and other contemporary disciplines can reach an amicable understanding of one another; for each, in a sense, is the critic of the other.

But now a preliminary word of caution is necessary. Two dangers confront the novice, and even the veteran, reader of Plato: the temp-

tation to extract Plato's thought from isolated passages,⁵ to be manipulated as "proof texts," instead of preserving a flexible and informed understanding of his thought as a whole; and the inclination to interpret his thought according to, or in contrast with, one's own point of view. The two dangers often conspire to trip the unwary. No doubt it is difficult to control the whole body of Plato's writings and to appraise duly their changes of direction and emphasis; and doubtless neither I nor any one else, not even Burnet or Taylor, not even Shorey or Jaeger, will succeed fully in persuading every other reader that he has perfectly seized on the Platonism of Plato. But nothing can excuse us from trying to avoid jumping at detached passages instead of considering contexts; from seeking to comprehend the *ethos*, the climate, of Plato's thought and expression; from considering the intellectual and political background and the claims of rival thinkers, as Field has done;⁶ or from observing how the very structure of dialogue, with its shifting lights,⁷ and how Socratic irony, how Platonic comedy and Platonic fervor, make the dialogues something very different from the promulgation of dogma.

Dewey, the arch-pragmatist and empiricist of our time, paid tribute to this aspect of Plato some twenty years ago when he wrote of "Plato, who still provides my favorite philosophic reading. For I am unable to find in him," he continued,

that all-comprehensive and overriding system which later interpretation has, as it seems to me, conferred on him as a dubious boon. The ancient sceptics overworked another aspect of Plato's thought when they treated him as their spiritual father, but they were nearer the truth, I think, than those who force him into the framework of a rigidly systematized doctrine. . . . Nothing could be more helpful to present philosophizing than a 'Back to Plato' movement; but it would have to be back to the dramatic, restless, cooperatively inquiring Plato of the Dialogues, trying one mode of attack after another to see what it might yield: back to the Plato whose highest flight of metaphysics always terminated with a social and practical turn, and not to the artificial Plato constituted by unimaginative commentators who treat him as the original university professor.⁸

Dewey doubtless realized that he was raising old ghosts, when he thus confidently skirted the battleground of nineteenth- and twentieth-century interpreters of Plato. Are we to believe, with Schleiermacher and Shorey, that in spite of minor differences from dialogue to dialogue, Plato exhibits throughout a general "unity" or coherence of thought? Or are we to stress, with the opposing School,⁹ the development of his thought, from early portraits of Socratic personality and

method, through a middle and most characteristic period, to a final phase of revised dogmatism? There is truth in both interpretations, as Jaeger has shown; and we shall not understand Plato if we neglect either.¹⁰ For as Plato mediates between tradition and rationalism, is both orthodox and revolutionary, both mystic and dialectician, so his philosophy is at once a development and a unity; but the unity is the more significant. "The mind of Plato," said Emerson, "is not to be exhibited in a Chinese catalogue, but is to be apprehended by an original mind in the exercise of its original power."¹¹

Now that saying of Emerson's, taken along with another remark of his¹² about "creative" reading in which author and reader collaborate, as it were, reminds us that Plato's work was not done when he spoke or wrote: it is not static, but dynamic, and calls for our active response. If it is false, it invites refutation; if it is true, it demands a change in our personal lives and in the world of affairs. As a matter of fact, Plato has seldom been regarded with indifference; either he has been admired or indeed idealized, or he has been cordially disliked. Those who admire Plato are apt to see their own features in his face, while those who do not love him see in him all that displeases them in their enemies.¹³ Thus the liberal Grote, and to some extent Mill, saw in Socrates the good utilitarian, a sort of parliamentary debater, and tended to discount the more positive contributions of the Platonic philosophy: Dewey would seem to agree with them. Shorey, on the other hand, could see in Plato no failing or inconsistency; if you fancy that you find one, you are stupid and perverse, or naïf, or are nettled by the Socratic and Platonic air of superiority.

As against the general chorus of approval of Plato's admirers, several talented writers have in recent years protested against the idealization of Plato. They are all, I take it, good citizens, good liberals and humanitarians; but they are repelled by what in his political thinking they conceive to be an authoritarian and reactionary strain, anti-scientific or overscientific (for they have it both ways). Warner Fite, in *The Platonic Legend*,¹⁴ objects to the "idealistic tradition" which has shut men's eyes, he thinks, to much that is unlovely in the Dialogues and in the life and character and style of their author, by whom, he admits, he is "repelled." R. H. S. Crossman, a former Oxford don, now an M.P. active in British and international affairs, wrote in 1937 a brilliant and two-edged book, *Plato To-day*, satirizing both Plato and modern society as seen through Plato's eyes. He is fascinated by the *Republic*, "the greatest book on political philosophy that I have read. The more I read it, the more I hate it; and yet I

cannot help returning to it," because, as he adds, "it is philosophy, rational discussion, disinterested research."¹⁵ B. Farrington, in several works, accuses Plato and other aristocratic and superstitious intellectuals of deliberately blacking out the rising science and technology which might have set man free;¹⁶ A. D. Winspear attempts a sociological interpretation of Plato, with similar results.¹⁷ And K. R. Popper devotes most of the first of the two volumes of his *The Open Society and Its Enemies*¹⁸ to "The Spell of Plato," that enemy of the common man who plotted to enslave him by totalitarian methods: to arrest all social change, or to force society to return to an imagined ancient tribal collectivism. One is not sure, for all his learning and his ample documentation, whether it is something static or something explosive in Plato that Popper is really attacking. One is not surprised to find in Lord Russell's *History of Western Philosophy*¹⁹ something less than a friendly treatment of Plato; but he hardly comes to grips with Plato's thought.

These attacks on Plato deserve serious consideration because they deal with the substance and meaning of Plato in a vital part of his teaching. The writers lack neither scholarship nor sincerity nor again knowledge of the world. I find myself in agreement with many of their sympathies, and should disapprove of Plato if they were right in their interpretation of Plato's meaning. As it is, I can only regard them as examples of mainly wrongheaded interpretation; for they fail to observe the two elementary principles for the reading of Plato that I have laid down: they do not reckon sufficiently with contexts and general intent, and they are animated by personal bias. They are like people inspecting a gallant ship in dry-dock, timber by timber, instead of watching her performance in a heavy sea.

Undergraduates, and laymen generally, are sometimes mystified if not actually antagonized by some passages in the Platonic dialogues which appear fallacious; they ask whether Plato is deliberately deceptive. For such perplexities there are several reasons. Occasionally we encounter innocent flaws of logic which lead to questionable results; this is not surprising at an early stage in the history of thought.²⁰ We find also the deliberate but playful use by Socrates of questionable logic to dispose of an opponent who deserves nothing better than to be ironically hoist with his own petard.²¹ Moreover Plato's shifts of emphasis or strategy sometimes lead to unexpected conclusions.²² But of intellectual and moral dishonesty, of deliberate use of unfair logic to defend a wrong position, Plato must be acquitted by any fair critic.

And occasional obscurities of thought in Plato, as in other writers, are not evidence of malicious deception.

2

Even the cautious Platonist will be disposed to find a positive content and attitude in Plato, a central avenue through the perplexities of discourse. He will see in him both the chronicler and the heir of Socrates, that catalytic mind and personality, sceptical and negative in the use of the elenchus, yet withal the champion of an affirmative teaching, the unity of all the virtues, for whom virtue is knowledge of the good. This sceptical Socrates lived and died for his mission, the "care of the soul." Thus for Grote, and even for some who are hostile to Plato, Socrates appears to be a sort of dissenting saint, a humanitarian and an open-minded seeker, who is to be preferred to the Plato who falsified his simple teaching.²³

The conception of knowledge of the good, of ends that determine action, which runs through the "Socratic Dialogues," is central also in Plato's middle period. It involves the exploration of human nature both in the individual and in society. Plato knew as well as Thucydides the seamy side of power-politics and the role of economic forces in the rise of social institutions; in fact the *Republic* includes a sketch of the genesis of the state from economic needs, but it subordinates them to the larger conception of the end of social living; order, moral health, justice, the good, — an ethical end. The narrow conception of "the economic man" is a rather modern invention, hardly to be found before the eighteenth century; Plato by implication rejects it.²⁴

Politics and economics, then, in Plato's own words, involve "the greatest of all questions, the choice between a good and an evil life."²⁵ Yet the prior interest of this political reformer is in the soul of the individual man. Such critics as Fite and Crossman and Popper have allowed their own interest in social problems to obscure Plato's method of indirection, his examination of "man writ large" in society as the projection of his analysis of the individual man; whereas Jaeger has done well to see as a major concern of Plato the true nature of education, the *paideia* of the individual in a society that is organized for his optimum development.

Plato's quest for ends leads him, in an age of relativism and bewilderment, to seek an absolute end, the frame of reference of all partial standards and values. Now, I suppose that there are four fields of human interest and activity in which we are compelled to believe in the reality of ends which are ultimate, ends in themselves,

ends beyond which it is impossible to go. (1) There are persons, possessed of innate dignity and value, deserving therefore of love, and to be treated justly in a society that respects individuals. This, in Christian terms, is the intrinsic worth in God's sight of individual souls; it is Kant's "use humanity always as an end, never as merely means," and Kant's "no man should consider himself more valuable than any other person." It leads, to be sure, to systems of ethics and political and economic theory which relate all values to human well-being; but it leads no less to our interest in all the homely details of daily living: the blazing hearth, domestic affections, the warmth and color of friendship, of urbanity, and of simple country pleasures. (2) There is the extension of personality in the creative arts, and, we may add, in sport. Granted that many such activities have risen from utilitarian motives and may have utilitarian results, their characteristic property and justification is activity pursued for its own sake with no ulterior end. (3) There is science, the pursuit of knowledge for its own sake (though again utility often enters in, as motive or as by-product.) (4) And finally there is religion, which seeks to relate man to whatever ultimate and absolute reality in the universe he can discover, whether this be conceived as author and governor of the cosmos, or as judge of man's actions, or as loving father of every soul, or as all of these.

With these four absolutes Plato deals severally in various dialogues, and constantly interpolates the treatment of one topic into the discussion of another topic within the larger framework of his philosophy.

(1) His ethical and political study of human nature is in terms of internal health of the soul, the control or subordination of lower instincts by the higher and more rational self, in the interest of the whole; this is the art of living.

(2) Such arts as poetry are therefore seen by Plato to move from the imitation of temporal objects to the embodiment of eternal truth, cheap indulgence of the passions yielding to a vision of supernal beauty.

(3) As to science, Plato preserves and develops the deductive and mathematical discoveries of earlier disciplines, and becomes the second founder of the mathematical sciences. To the mechanistic causes that earlier speculations have discerned, he adds a final cause, in the person of the divine demiurge, and a new conception of the self-moving soul, and thus becomes the founder of natural theology. Though Aristotle is a better biologist, and Plato's physics is derivative, Plato's general view of nature has been held by Whitehead to be nearer the physical theories of our day than anything in Democritus or Aristotle.²⁶

(4) Plato's religion begins with his recognition of the inadequacy of Greek civic religion and of the necessity of expurgating the ancient myths in accordance with three fundamental principles of theology: God is good; God is unchanging; and God should be the model for man's imitation in his moral life.²⁷ The secular morality of the earlier dialogues and of the *Republic* is reinforced by the natural theology which showed a divine governance of the world, and by the conception of the immortality of the soul, whose fortunes are imaginatively described in the poetic terms of myth and the mystery religions. But it is in the tenth book of the *Laws* that Plato revives all these lines of approach, and methodically refutes the three types of atheism which the *Republic* has merely enumerated, including "Epicurean" materialism.²⁸ The result is the picture of both the universe and individual souls providentially governed.

Ethics, art, science, religion: these absolutes could not remain for Plato as separate, even if converging, lines of thought and activity. The unifying principle which integrates them is the famous theory of Ideas or Forms; this represents, as Cherniss has ably pointed out, a "philosophical economy," since it is "a single hypothesis which would at once solve the problems of [ethics, epistemology, and ontology] and also create a rationally unified cosmos by establishing the connections among the separate phases of experience."²⁹ (To the three fields thus designated by Cherniss, I should add a fourth: art or poetry). The reasoning is as follows:

(1) The Socratic quest for a unity of the virtues, an absolute standard to oppose the relativism of Protagoras, results in Plato's discovery, as the only possible alternative to moral nihilism, of an objective correlate to the distinctions found by experience; goodness is thus prior to goods, the Idea to the thing.

(2) But knowledge, the rational apprehension of truth which must be distinguished from mere opinion, even from right opinion, likewise requires the Ideas; sensation and thought are different, and have different objects.

(3) And the structure of nature also reveals both the transitory flux of the phenomenal world and the permanence of intelligible qualities or Ideas.

(4) As to poetry, Plato reaches the conclusion that it could and should aspire to the expression of the Ideas.

If, then, the Ideas are the real essences to be discerned within and behind transitory things, they must be somehow related to one another; they are in fact related, as Plato holds, by their common

though diversified kinship to the greatest of all objects, the Idea of Good, the author and interpreter of every lesser thing. This concept is never in so many words equated by Plato with his God, or with the divine *demiurge*: but the difference is less one of function than of the divergence between prose and poetry, between impersonal reason and the personification of myth.

3

After this rapid stroll along the central avenue of Platonism, let us look as rapidly at some of the rivals of Platonism which have presented themselves in modern times, more often as unconscious than as deliberate critics of Platonism. Do they merely describe the world in modern terms, or do they offer also norms of conduct and thought; and if norms, are they acceptable and adequate? How would Plato regard their claims and their methods?

We all must admire the resourcefulness of modern empirical science and its generally useful (though occasionally destructive) applications to human life. Plato would applaud the disinterestedness of its pure research; he would deplore the absorption of the public in the multiplication of gadgets. But his graver misgivings would be reserved for those natural scientists who suppose that a complete philosophy can be derived from their science. As he opposed the materialistic science of his age that assumed that there is no purpose or intelligence behind the physical world, so in spite of his own deep interest in measurement he would challenge the arrogant assertion that the only real things are those that can be quantitatively measured.³⁰ For there are realms of interest and experience not amenable to quantitative measurement; ³¹ these are the realms of human interests and values, of good and evil, of the substantive Ideas, of religion. To the relativism of Protagoras, whose measure is man, Plato retorts that God is the measure of all things.³² And if mechanistic physics measures only one aspect of reality, so also evolutionary biology errs if it supposes either that all mutation is predictable, or that it is incompatible with a larger design. For since it takes mind to discover physical and biological law, that law itself must be in some sense rational. The discovery of a design in nature, as Mill argued,³³ rests not merely on analogy but on genuine inductive reasoning; and though nature seems often indifferent to our interests and still more to those of other animals, nevertheless it is sheer arrogance for any scientist to assert that all reality is determined by the forces that he can measure in his laboratory. Values, norms,

reason: these remain the province of humanistic and religious experience. So Plato would still insist that scientific research ends in natural theology, the discovery of God in nature, while human values are the concern of a human society organized on ethical principles by men whose will is free. And man is more than the sum of his components.

Though modern political science and economics are concerned with both means and ends, the chief emphasis is on means, the description of processes.³⁴ For the political scientist, the "democratic process," perhaps anticipated by a "Gallup Poll," is now almost an end in itself. What the common man desires, multiplied millions of times or modified by manipulation and compromise, has the air of being the final word of a sovereign people. Certainly respect for the ballot box would seem to express not only democratic but Christian conceptions of the worth of the individual; and the party differences that divide our Hamiltonians and our Jeffersonians and all the details of constitutional machinery appear to be very minor refinements. For a Platonist to ask whether the voters or their elected representatives know what they really want, or would want if they were wiser, now savors of heresy.

A similar assumption lies behind a good deal of contemporary thinking about "economic man" and his desires. The modern Marxist is merely the extreme determinist among economists, but even Western thought has till recently clung to a capitalistic form of determinism.³⁵ When it is suggested that government take some degree of control in a planned economy, an ethical norm is at least gaining recognition; but the real question is "planning by whom, for what, and for whom?" No available method can measure the amount of human happiness for a heterogeneous population that may accrue from various degrees of planning, ranging from *laissez faire* "free enterprise," to complete socialization. In democratic countries, the choice is left ultimately to the voters, who are supposed to know where the shoe pinches. Yet the boundaries are thin between such qualities as humanitarianism, altruism, a "bold Point Four," paternalism, the Messiah complex, and the corruption of authority by the very possession of political power. So those who approve of limited or "piece-meal" planning are suspicious of radical planning, which they regard as the "road to serfdom." It is to von Hayek, whose phrase I have just used, that Popper says he is "deeply indebted." And Popper bitterly criticizes the "radical planning" of Plato's *Republic*. Plato is indeed a political planner; but in matters economic, save for the rulers who are to be absolutely removed from the economic struggle and are to receive a bare sub-

sistence, Plato somewhat carelessly leaves the profit motive undisturbed. But he insists on the ethical motive in economics as in politics, and on the subordination of desire to reason and an educated and disinterested control. Such confidence as we have in the bench, and in appointed non-political federal commissions and cabinet officials, would be our best analogue.

Modern Psychology has added to the Platonic and Aristotelian and Lockian analysis of the soul, which was descriptive and ethical, new experimental techniques for the measurement of stimulus and response; it has now cut most of its ties to its mother, philosophy, and to its ethical premises. It is now "dynamic," or "clinical," or "behavioristic," describing objectively the psychosomatic condition of individuals or of groups. So it is ready for new alliances, with physiology and anthropology and sociology. Meanwhile the rise of Freudian investigations and "depth psychology," still more recently of "diagnostics," has pushed the focus of interest still further back into the realm of the unconscious, of inherited or acquired behavior patterns, and therefore has emphasized such mechanisms as complexes, symbols, covert responses, rationalizations, and censorship. Yet the assumptions of naïf behaviorism are beginning to yield to the conception of the total configuration of personality, in *Gestalt* psychology. And it is realized that there may be "pulls" from the front as well as "drives" from the rear, final as well as efficient causes.

What the Platonist will feel is still neglected is the ancient emphasis on the freedom of the will and the moral judgment. The psychology of the *Republic* and the *Phaedrus* (and likewise its analogue, the triply divided state) may be too rigid; but at least it generously recognizes men's desires and "drives," subjecting them however to rational guidance within what we have learned to call an "integrated personality." Even the Freudian wish and the Oedipus complex have been described by Plato in an eloquent passage on the dreams of the unjust and of the just man.³⁶ That is, Plato recognizes, but does not glorify, the unconscious; nor does he entertain the unproved assumption that all behavior is determined by unconscious impulses. And to Freud's subjective conscience, his internal accuser and judge, Plato opposes an objective conscience derived from knowledge of the good. If the Greeks had no precise word corresponding to our "will," Plato at least realizes clearly the freedom of the will, a moral will not to be confused with wilfulness, as a fact of consciousness implicit in all moral and legal judgment. So the analysis of political constitutions and revolutions in the *Republic* is based on insight into the psychological char-

acters of different kinds of individuals; and the *Republic* ends with the representation of souls choosing their destinies with varying degrees of wisdom.

Modern anthropology has opened the windows of western civilization on far places and on men now like, now unlike, ourselves, thus instilling a greater tolerance of variation and a greater amenability to the possibility of change, and a better and more critical understanding of ourselves. It has moved from the collection of scattered similarities to the study of whole cultural patterns, arguing that custom or inherited "folkways," in a word, environment, is more powerful than reason or biological inheritance, than race or nation.³⁷ Yet since cultures vary, but have their *mores* or norms of conduct, many scholars refrain from ranking cultures in any supposed order of merit, extending an amnesty to all. "There is no reason to suppose," wrote Miss Benedict, "that any one culture has seized upon an eternal sanity and will stand in history as a solitary solution of the human problem." And she concludes with a plea for accepting with tolerance "the co-existing and equally valid patterns of life which mankind has created for itself from the raw materials of existence."³⁸ Kluckhohn, however, finds in cultural relativity not the denial of moral absolutes, but rather a comparative and scientific method of discovering them.³⁹ How far it is possible to discover, besides the special types of personality of the several cultures, any general "human nature," is a question concerning which the anthropologists are cautious: Margaret Mead holds that human nature is constant;⁴⁰ Kluckhohn is now inclined to find certain "universal values" in all cultures, and to demand that anthropologists study them;⁴¹ and all agree that the individual is malleable. Anthropology thus interposes a middle term between "nature" and the individual: it is the power of culture or social pressure, which may, it now appears, select its objectives. It almost seems as if the latest trend in modern anthropology is a tacit return to Platonism.

Nevertheless the anthropologist has his problems when he seeks to understand personality and individuality. He refuses to see any absolute antithesis between the individual and society. People are flexible, and are molded by early training and environment and propaganda, though they vary in the degree to which they finally fit into their environment and become "normal." The role of heredity is now discounted. We are what we are as a compromise between culture patterns and those deviations and stubborn resistances which may begin as temperament but which end as persistent habit or character.⁴²

Our western civilization is more complex and stratified than the

primitive societies studied by the anthropologists, and includes countless patterns; it also bears more clearly the marks of great personalities who have changed the direction of history, — warriors, scientists, religious leaders, all those whom Carlyle would have called “heroes,” — even if there has been a long time lag between their innovations and their full impact on mankind. For man changes very slowly, and we may well learn from the anthropologists to be not only tolerant but appreciative of diversity, and to be modest in our hopes of fundamental social change.

Now the Greeks were not unacquainted with anthropology; Herodotus reported the strange customs of the barbarians; and was not alone in quoting the saying, “*Nomos basileus*, Custom is King.” To be sure there were sophists who disputed it, and argued that *physis* is prior to *nomos*, though both terms were ambiguous and might seem to justify any kind of conduct, as fact or as norm. Greek medicine generalized what was known of the *physis* of the body, and its generalizations were extended also to the mind: so Thucydides could claim for his history a universal bearing because of the uniformity of human nature;⁴³ and so Winston Churchill could declare (May 13, 1945): “It is only from the past that one can judge the future.” Plato’s concern with human society is not quite so parochial as is usually supposed; he knew many foreign cultures, and in the *Laws*⁴⁴ proposes studying them and borrowing whatever may be helpful. He was notoriously a believer in eugenics, breeding from the best stock; yet his major preoccupation was the reform of the individual and of society by education (or, shall we say, “cultural conditioning”). Instead of seeing, with the sophists, a necessary conflict between *physis* and *nomos*, he undertook to show in the *Gorgias*, the *Republic*, and the *Laws*, that there is a *nomos*, a principle of development and control, in the *physis* of man, within the law of the cosmos.⁴⁵ This means that human nature, despite hereditary differences, has a certain general uniformity which justifies the Platonic psychological analysis, but that man’s full nature is achieved only as it is formed by society; he is a composite of heredity and environment and individuality, but is absolutely determined by none of these. The perfect balance of factors is imaginable only in a perfect society; in any existing society even the finest natural capacity (*physis*) fails to find its appropriate nurture (*trophe*) or is actually corrupted by it, and the more grievously corrupted the greater its original promise, unless by some happy accident.⁴⁶ Thus, under the horticultural figure of nature and nurture, Plato reckons with the problem that anthropologists raise to-day in terms of man and culture,

or that Soviet genetics settles by stating that environment modifies the organism.⁴⁷

The ambition of the sociologist is both to study the social structure and the "drives" or trends of social groups and to enhance human welfare by influencing the environment. He relies largely on statistical methods and on interviews or polls that are expected to indicate attitudes and trends. Yet he sometimes betrays a deterministic character, as when a distinguished sociologist some fifteen years ago achieved a national notoriety by announcing: "You can't buck a sociological trend." By "a sociological trend," I take it, he meant a trend that cannot be "bucked," which leaves us where we started. But there is a defeatism in the statement that seems inconsistent with the good intentions of sociology to improve society. It derives from the fallacious method of accepting statistics as norms, as if one were to publish the figures about murders in the United States for a given year and were then to announce that "the drive to murder" is so-and-so, and cannot be bucked; that in fact this figure represents the American idea of about the proper amount of murder for our kind of society.

What Platonism is concerned to point out is that neither natural science nor social science is competent to describe human nature or to direct human endeavors unless complemented by the humanistic and historical and philosophical disciplines that deal with man as a complete being, a rational being, potentially a religious being. The will may be rational, as truly as is the intellect.⁴⁸ Platonism has a good deal to say about public opinion, which may amount only to the moods of a great beast,⁴⁹ or may by good luck be "right opinion." The quantitative count of opinions is no substitute for the qualitative study of human motives and for the impact of unique and great original minds who have established norms of conduct: such minds as Socrates and Jesus and Gandhi. "For," says Plato, "the highest object of knowledge is the essential nature of the Good, from which everything that is good and right derives its value for us. . . . Without that knowledge, to know everything else, however well, would be of no value to us, just as it is of no use to possess anything without getting the good of it."⁵⁰

Since no history can be written without the selection of materials, the emphasis on what is significant, and perhaps some attempt to discover causes and trends and to pronounce judgments in terms of value, the step is not a great one from history to the philosophy of history: the attempt to see, in all the processes chronicled, a geometrical

pattern, of progress or retrogression or alternation or cycles, possibly even a purpose.

The earlier philosophies of history were apt to be theological, as in the Jewish and Christian accounts of God's way with man, and as in even a good deal of Greek and Roman poetical and historical speculation on progress or degeneration and on divine providence. Other classical interpreters of history, such as Thucydides, were secular and humanistic, and discounted divine interference, unless in the form of chance. The medical writers and the Epicureans, like empirical scientists of modern so-called "ages of enlightenment," have generally confined their attention to material processes, but have sometimes avoided the crude determinism of the atomists. Yet dogmatic determinism has often been applied, as by Marxism, both to cosmic and to human areas. Spengler's notion of history as the inevitable flowering and decay of alleged social organisms relies too much on his own intuitive detection of stages and cycles, and ignores the conscious self-direction of great leaders or of societies; history is not so simple and monolithic as Spengler supposed. Toynbee's far better informed analysis, in its use of certain master-concepts, such as "challenge and response," involves no easy assumption of determinism.

Plato has both his secular and his theological sides. Like Thucydides, he realizes that there is no stability in individual organisms or in societies. Genetics and education may operate favorably or unfavorably. Plato therefore traces in the *Republic*, in a generalized pattern, the cultural rise and decline of man and his institutions; his primary concern is not political in the narrow sense, but is rather the exploration of the individual's powers of moral and rational self-direction, and of his internal decay. The changes are continuous, not arbitrary jumps. In the *Laws*, Plato returns to the philosophy of history, with less admiration of Spartan discipline; indeed he now goes out of his way to explain the failure of Dorian societies ("arrested" societies, in Toynbee's language) by their lack of the right kind of *ethos* and *paideia*. Throughout these long discussions Plato consistently maintains his opposition to any determinist interpretation of human history. K. R. Popper, who is also, and rightly, opposed to such determinism, is simply perverse in interpreting Plato as, to use his own term, a "historicist," that is, a believer in historical determinism. Elsewhere, as in the myths of the *Politicus* and the *Timaieus*, Plato attempts to reconcile a theological interpretation of cosmic history with the recognition of material necessity, of irrational forces, and of human vice.⁵¹ This is a cautious philosophy of history; it re-

peatedly restricts the role of the divine helmsman or demiurge. Plato is avoiding predestination, while defending the general rationality of the cosmos and the moral freedom of man. Chance he reckons with but slightly; and certainly he does not undertake to prophesy the details of future history. I am not sure that this is not as far as Plato could reasonably go.

To the claims of all his modern critics and rivals whom I have listed, Plato might make a general reply. There is a cosmic order, to be dealt with both in terms of the natural sciences and in terms of reason, measure, the Ideas, soul, God or the divine demiurge: yet in the temporal flux, for reasons which can be metaphysically analyzed or mythically expressed, this order appears imperfectly. There is also a human order, consisting of individuals, largely conditioned by heredity and social environment, but nevertheless free to seek ends and make moral choices,⁵² best of all if they experience a conversion of the mind and will and achieve an inward harmony of the soul. Their societies, too, are enormously influenced by all manner of forces, so that we shall do well to use all that the social disciplines can teach us, remembering also, however, that societies, too, are free to reshape themselves from within, and best of all under the guidance of the fervent but disinterested lovers of the Good. The two orders are not mutually exclusive, nor are we alone in our human struggle: for, as Plato puts it in the *Laws*,⁵³ "the world is full of many goods and also of evils, and of more evils than goods: and there is a deathless battle going on among us, which requires marvellous watchfulness, and the gods and *daimones* are our allies." Here in the language of popular religion Plato brings together the human and the cosmic orders. The freedom of man is exercised within the cosmic order: but man's powers include not only the physical and intellectual, but the spiritual, resources which he will neglect only at his peril.

4

Now that we have reviewed some of the modern rivals of Platonism and glanced at the attitude with which Plato might perhaps have regarded them, it is only fair to recognize some of the stumbling blocks that stand in the way of a ready acceptance of Platonism. These may be described as *-isms*: idealism, Utopianism, totalitarianism, or anti-liberalism, intellectualism, communism, and Puritanism.

The objections to Plato's idealism (or perhaps better, realism) are ancient and philosophical; most of them were stated by Plato himself

and by Aristotle. But Natorp and Stewart have well shown⁵⁴ the double sense in which the Ideas may be said to exist: as concepts in use, such as all of us, even pragmatists, accept as the necessary alternative to logical chaos;⁵⁵ and as absolute objects of aesthetic and religious intuition and contemplation. Without the former sense, scientific and philosophic thought would be impossible; without the latter, the experience of the poet and artist and of the religious seer would be impossible. One can hardly be a Platonist who does not recognize both senses. Actually, the Ideas as methodological tools are generally accepted, and it is only their separation from phenomena that is disputed, as by Aristotle. In the earlier dialogues and the *Republic*, idealism does not mean that physical objects are not real, or that they have not indeed a complete and independent reality; it means only that to the extent that they are less true to their respective norms than are the Ideas, which they imperfectly embody, they are more amenable to opinion than to knowledge. How Ideas are related to particulars and to one another, Plato is not sure; he seeks to recognize both the immanence of Ideas in particulars and (especially in the later dialogues) their transcendence in a world that has a structural coherence.⁵⁶ But it is doubtful whether Plato ever really separated the Idea from phenomena; moral and psychological dualism was necessary, and a time lag in the cosmic process; but Plato's universe was one, as Dean Inge and Paul More perceived.⁵⁷ The *Timaeus* exhibits intelligence "persuading" necessity.⁵⁸ Santayana, who betrays Platonic leanings yet denies any necessary connection between Platonism and that spiritual attitude which both Inge and he describe so brilliantly, seeks to lift himself by philosophic bootstraps from the naturalism of Spinoza into some rarer atmosphere.⁵⁹ But the effort is vain. Granted that the Ideas can never be seen by any of us in all their dazzling purity, as Plato holds, and that the primal Idea of Good can be conceived only by the help of images, Plato has nevertheless pointed the way to them.

It is on the Idea of Good, of course, that Plato's less imaginative critics have heaped their greatest scorn. Aristotle and Grote and Mill and Popper, for example, blame him for erecting into an absolute a conception that is never described, save by analogies, that is empty, that is indispensable yet unavailable. Grote, for example, complains that Plato "conducts us to the chamber wherein this precious and indispensable secret is locked up, but he has no key to open the door."⁶⁰ The real answer to such criticism is that the description of the Idea of Good is not to be sought (beyond the figures of the Sun

and Light) in any one passage, but everywhere. The minor Socratic dialogues, seeking to show the unity of the virtues, fill in much of the content: the Parable of the Cave and its sequel suggest the spiritual conversion and the dialectical process that leads toward the master-Idea; but Plato is no more and no less than honest when he declares that human effort can go no further. To ask more is to require omniscience. What all the several sciences and activities do is to establish certain results as so far probable and good; what is needed further is to integrate all these results in a whole by relating them to an ultimate term, a final cause. All the rivals of Platonism assume some working definition of the good sufficient for their purposes: Aristotle's "Happiness," for example, is derived from Plato's "Good," but is not so useful as an ethical concept. What Plato seeks to do is to regulate and reconcile all conflicting goods in a larger synoptic view. To be content with less, is to lose the significance, the good, of everything.⁶¹ The existence of such an Idea is for Plato sufficient ground for ardent aspiration, even for mystical and religious adoration. But he never supposes that he has fully embraced the Idea; he would agree both that "No man hath at any time seen God," and that "the pure in heart shall see God."⁶²

Plato's philosophical idealism is not unrelated to what may be called his Utopianism, and that in turn to whatever totalitarianism is to be found in him. Utopianism, the grandiose vision of the dreamer who in Emerson's phrase "hitches his wagon to a star," is now somewhat out of fashion. We like to think that we are realists, modestly attempting the possible. But then we should remember that Plato himself declared that it is of the very essence of an ideal that it cannot be fully realized in this world.⁶³ We must proceed by hypotheses, "doing away" with them only when (or rather if) "that which is perfect is come."⁶⁴ We steer by the polestar not in the hope of overtaking it but because it is a more steadfast guide than the islands and headlands that we pass.

Yet is Plato quite so innocent as this figure would suggest? During the past decade, in teaching the *Republic* to classes of undergraduates and graduate students I have felt myself more on the defensive than in previous decades, chiefly, I think, because many of these students regarded Plato as sympathetic to, if not actually responsible for, totalitarian systems that we have recently come to know so well and repudiate so completely. Indeed, academic and official voices both in Germany and in Russia have claimed Plato now as the founder of the Nazi, now of the Soviet systems. And able writers support such no-

tions. Thus Crossman remarks that Plato used to be dismissed as an impractical idealist, "dreaming of a transcendent City of God," but that since the first World War he has been recognized as a grim realist in his "estimate of the moral and intellectual capacity of the masses"; and that his "philosophy is the most savage and the most profound attack upon liberal ideas which history can show."⁶⁵ Popper, who approves of "piece-meal social engineering," thinks that Plato's "Utopian engineering" is at once a blueprint for the Ideal State, requiring the cynical dictatorship of the few, and a nostalgic program for a return to the arrested tribal society of the past.⁶⁶ Thus Popper fantastically attributes to Plato two inconsistent purposes: both to "arrest all political change" and to promote a violent return to the stability of "nature." The inconsistency is not Plato's, but Popper's, and rises from his failure to observe the continuity of Plato's delineation of the rise and fall of man's inner self.

Now the sufficient answer to all these suspicions is that in the *Republic* Plato was not offering a blueprint, but was appraising human nature and pointing the direction in which individuals and societies, not in the past but in a future guided by past experience and present knowledge, may approximate a goal. This program is not Utopian engineering but is a propaedeutic to any individual or social advance. Superficial resemblances should not blind us to the vast difference between Plato's view of man as a rational being and the totalitarian view of man as a tool to be manipulated. "Much has been written," Barker recently remarked, "about the interpretation of Plato in the last thirty years. Once interpreted as a revolutionary of the Left and a prophet of Socialism, he has latterly been interpreted as a revolutionary of the Right and a forerunner of Fascism." And Barker continues to express his own view that Plato is "a revolutionary indeed, and even an authoritarian, but a revolutionary of the pure Idea of the Good, and an authoritarian of the pure reason, unattached either to the Right or the Left."⁶⁷

Many of our perplexities about Plato's political thought can be dispelled if we realize that the earlier books of the *Republic* described the growth of an ideal or model state which Plato did not seriously expect to be realized, and that the later books explore the social and philosophical conditions under which it might conceivably be approximated, notably by the authority of a philosopher-king. But it is distinctly not proposed as a viable substitute for existing societies.⁶⁸

Whatever in the *Republic* may be regarded as totalitarianism stems from certain convictions: the existence of an absolute standard, im-

perfectly expressed in our world; the natural inequality of men, leading to the economic division of labor and to the selection and breeding and education of those most nearly adequate to the task of expressing this standard; and the off-chance that the union of philosophic insight and political power, in the "philosopher-king" or in a few such men, may approximate the imagined best state. But such power is not tyrannical, is indeed unwillingly assumed as a duty and is carefully cut off from any opportunity for economic advantage; only through a sense of *noblesse oblige* does the liberated prisoner who has seen the light of day return to the Cave to help others. He is the exact opposite of the tyrant who uses men as tools. Nor is this a caste system; the citizens are selected for their tasks after repeated moral and intellectual tests, and rise or fall according to merit.⁶⁹ Nor is Plato's conception of society static, in Popper's language a "closed society"; Plato traces its rise and its necessary decline, and it is only at the apex of its imagined perfection that he would like to stabilize it by political devices as far as possible. His state is made for man, not man for the state; his "justice" is the recognition of reciprocal relationships,⁷⁰ not an enforced code of behavior.⁷¹

After the failure in Sicily, Plato further explored in the *Politicus* the advantages of flexible personal rule; but in the *Laws* he returned, except in its last book, to the conception of impersonal fundamental law and to a mixed constitution, with philosophic preambles to the detailed legislation. Here Plato states as solemnly as did Lord Acton the corrosive effect of absolute power. No mortal can bear irresponsible power, he says, without losing his wisdom and integrity; therefore men must be subjected to law.⁷² Plato thus anticipates the great saying of Sir Edward Coke: *Non sub homine, sed sub Deo et lege*.

Yet one may still ask whether Plato's fundamental sympathies were with common people, with humanitarianism and liberty, or whether he was not rather an intellectual aristocrat incapable of sharing ordinary experiences, and in spite of himself a kindly snob. He sincerely believed that his ideal state, by providing the general rules of the game within which society might operate, was calculated to afford every individual the maximum of happiness of which he was capable, consistent with the happiness of others, by his minding his own business in an orderly society. That is not equalitarianism, to be sure, but it respects the diversity of talents, and recognizes the consent of the governed as the basis of government.⁷³ Plato does not regard liberty, the right to choose and with it the right to make mistakes,

as an end in itself, but rather, with Mill, seeks freedom in self-regarding behavior, and social control where general interests are involved.⁷⁴

Although the educational program of the *Republic* seems to be intended for the chosen few, while the masses will pick up what education they can from their fellows and their jobs, nevertheless all the young are to be surrounded by a beautiful environment.⁷⁵ The *Laws* however is quite definite in providing for the public education of ordinary citizens, and not only (as in Athens of Plato's day) for sons of the wealthy. Plato is thus the father of the public school, as well as of the university.⁷⁶

Plato's university curriculum has been criticized for its cold intellectualism; could men so trained deal with persons, or value ordinary men? The hard abstract thinking required by the curriculum is of course intended to create disinterested rulers who have learned to distinguish, as the man in the street does not, between apparent and real goods.⁷⁷ Nevertheless one may feel that Plato goes too far in denying ordinary men the ability to think for themselves, and in giving the rulers such powers of indoctrination: for him the masses are morally and mentally children all their lives, at best achieving "right opinion" through culture patterns and myths and symbols, whereas the wisdom of the rulers is assumed to approximate infallibility.⁷⁸ Even in the *Laws* the citizens are pledged to absolute loyalty to the official doctrine of the state:⁷⁹ and his soldiers, in times both of war and of peace, are to be so well indoctrinated that their least actions shall be performed not on their own initiative but solely through obedience to leadership,⁸⁰ a point which Popper considers typical of Plato's whole anti-individualistic philosophy.⁸¹ Waiving the fact that military establishments have never dispensed with martinets, and the fact that life is full of rival influences to the pursuit of the good, I think it is true that Plato exaggerates the gulf between ordinary men and leaders. A living society must give the ordinary citizen not merely a vote but also the opportunity to learn, and not from politicians, how to make his vote intelligent. By the same token, there can be no university worthy of the name that is subject to the political pressure of the state. Academic freedom is a strange and precious thing; it means that scholars are subject to no direction except that of their own minds and consciences and those of their peers. The chief governing board of a university, to be sure, may be (and as a matter of fact in some cases has been) for centuries a self-perpetuating body without any abuse of its powers; while in some cases the trustees or

regents of a state university may seek to exercise an intolerable political control over its teachers.⁸²

I do not wish to defend Plato's proposal in the *Laws* that his Nocturnal Council, the very "anchor" of the state, have authority to persecute and to punish, as atheists, those dogmatic materialists who persist in disbelieving in the dogmatic theology of the state, a proposal which naturally offends all liberals, and which some scholars dismiss too lightly.⁸³ The most charitable interpretation is that Plato, whose master refused to nullify the law by escaping from prison,⁸⁴ considered impiety to be morally and therefore politically dangerous, a "clear and present danger" to the state.⁸⁵ Moreover his proposed procedure is rather better than that of our recent handling of possible "security risks." It gives no heed to irresponsible accusations; it offers dissenters an opportunity for recantation after involuntary submission to lectures; and it supposes that rational men will at last agree. Yet the part of wisdom is to admit that good men will always disagree about many things, but can remain both critical and mutually tolerant.

Few have cared to maintain that Plato was a lover of democracy. The few scornful references to *banausia* do not imply any scorn of honest labor, or that a man is not a man for a' that and a' that, but merely that there is the possibility that a man's immediate job, whether that of the blacksmith or, we may add, that of the white-collared specialist, even that of the philologist, may maim his soul.⁸⁶ More significant are the condemnations in the *Republic*⁸⁷ of the cobbler who seeks to leave his last; or of the undisciplined state of mind of the democratic man and his counterpart the democratic society, never able to catch up with their desires.⁸⁸

But what Plato is attacking is not what we conceive as "democracy," — the never fully realized ideal of Periclean or Jeffersonian democracy, of equality in the eyes of the law, liberty of opportunity according to merit, secured by the franchise and above all by the rule of law and mutual tolerance. What he attacks is the irresponsible late-fifth and fourth-century dictatorship of the proletariat, exercised in the assembly under the sway of demagogues, and in the popular courts of law, "assigning a kind of equality to equals and unequals alike."⁸⁹ And if democracy is for Plato far from being the best kind of social order, neither is it the worst; it is less effective, he says in the *Politicus*,⁹⁰ either for good or for evil, and less of a government (since power is dissipated among many) than the rule of one or of a few.

In the *Laws*, with its recognition of "natural" or "proportional" equality of citizens,⁹¹ (actually a kind of inequality) the "mixed con-

stitution"⁹² with its checks and balances, responsible courts devised with extreme care to ensure competence and justice,⁹³ and the over-all sovereignty of law that is explained in preambles and that is based on the consent of the governed,⁹⁴ Plato becomes one of our "Founding Fathers." Indeed he shows, if not our concern for "the democratic process," at least a far greater sympathy with our general democratic ideal than with totalitarian theory or practice, save in the one case, already mentioned, of state trials for impiety.

To the suggestion that Plato is the father of communism, the reply can be brief. What is so fiercely and so rightly opposed in contemporary communism is not, of course, that visionary quality which is actually akin to certain traits of Christianity, nor again the possibly naïf economic system which seeks to distribute the fruits of toil, nor even its materialistic basis. It is rather the totalitarian dictatorship which now controls the system, the militarism and imperialism, the internal thought-control and the external espionage and infiltration and sabotage and fomentation of war. Plato's proposal is utterly different in motive and in extent. The *Republic*, written when Athens had already lost the economic buoyancy of the Periclean age, contemplates the abolition of private property and of family life for the ruling minority, and for them only; the great majority of citizens are to continue as private entrepreneurs and little capitalists. For the communism thus proposed, the motive is purely moral: to set political power free from every opportunity for selfish advantage; it is not the "share the wealth" of modern communisms. As to property, it is a sacrifice, a monastic vow of poverty; as to family life, this is one of Plato's few failures to reckon with the richness and beauty of human nature; he, like most of his contemporaries, little divined the spiritual side of marriage, and thought it could be made to serve the state by breeding citizens only at its behest. And then, too, he was a bachelor. But we should note also that in an age and city that gave women little scope he proposed to give them the same education and activities and political powers that men were to have, not as rights but as duties. We may note, too, that in the *Laws* communism has been virtually dropped.

The last of the stumbling blocks which Platonism presents I shall discuss briefly, especially since I have dealt with phases of it elsewhere.⁹⁵ Plato, some say, was at heart a Puritan, intolerant of poetry and the arts unless they could be made to serve morality and the state: he therefore subjected poetry to expurgation and censorship, and put the poets into strait-jackets, or actually exiled them from his ideal

state. There is, of course, an element of truth in such criticism, a dangerous half-truth. Plato has his austere and negative side, and he is deeply in earnest about the harm that certain kinds of art can do, especially to the young, in feeding the passions, and in closing the eyes to ultimate truth. Read the Parable of the Cave as satire on Hollywood and all it stands for, and you will get some notion of what Plato is driving at. If forced to choose between poetry as it is and philosophy as it might some day become, he will appear to bow poetry out of the way.⁹⁶ But of course such a choice is no possible dilemma, and the exile of poetry is not to be taken literally. And there is also the positive side of Platonism. Read the Parable of the Cave again, this time as an invitation to escape from the world of Hollywood and to contemplate the light of day, and you will find that Plato does not suppose that it is possible to gaze immediately at the sun of truth, but that other reflections and images must intervene. There, in a word, is Plato's real attitude: poetry, the arts, language and life, must use images, myths, symbols, analogies, not as ultimates but as our best means of advancing toward the realm of the Ideas and the Good. He bids us doubt the vulgar realisms, the absorption in the world of the senses about us, the current values and personalities, or at best to use them as mere steppingstones toward the dimly but progressively descried promised land. Thus poetry and art, or indeed all human activities, may come to express (or, as Plato and Aristotle would say, may "imitate") the truth which philosophy may discover; just as, conversely, all nature and life may be interpreted in terms of the Ideas, and especially of the Idea of Good. I may add that although analogies and symbols must be used by logic and science with extreme caution, I have noted a tendency of modern scientists (physicists and astronomers) to use them as a necessary means of communication, so that art, science, and religion may prove ultimately to have far more in common than is generally supposed. Thus Plato is not the foe of the poets, but is himself the arch-poet, through his understanding of the necessity and function of metaphor as the link between this visible world and the ideal world, and through his conception of love as proceeding from earthly beauty to "the vast sea of beauty."⁹⁷

Plato's myths, which approach imaginatively the ultimates of human experience and inquiry, — God, the origin and the destiny of the soul, the divine justice (corresponding roughly to Kant's moral postulates), — are a fair test of the modern reader's ability to stretch his mind. Are you literal-minded, good at counting and weighing what

can be weighed and counted, but suspicious of travelers from far countries who tell what they have seen? Then you are no Platonist. The Parable of the Cave, with its sudden illumination, is probably not for you. Even the humbler Myth of the Metals, which Plato introduces by a phrase that used to be translated as "a noble lie," but which Cornford has more correctly turned as "a bold flight of invention," may then offend you, as it has shocked many critics.⁹⁸ I refuse to be shocked by this innocent, fanciful, and transparent little allegory, told with a show of hesitation but with persuasion rather than cynical deception as its intention: the point, of course, which offends equalitarians, is that men have unequal capacities and that it is everybody's loss to pretend otherwise. Plato is not comparing races, in the modern sense, but kinds of person in a given society. Whether to go so far as to defend also the "medicinal lies," told for another's good and without self-deception or selfish profit, which Plato twice condoned,⁹⁹ is a grave question, which imposes an awful responsibility on physicians and on those who seek the health of the body politic. But "truth embodied in a tale,"¹⁰⁰ whether of poetry, or of fiction, or of a Platonic fable, need not raise the blood pressure. After all, legislators are in a sense poets, as Plato says in the *Laws*.¹⁰¹

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Platonism, then, is not a dogma once promulgated but a living attitude. It manifests an eager concern with the world about us, but reads this world as an imperfect and changing expression of an eternal order, and bids us do in our time what lies in our power to reshape it. Never content to believe that material and automatic forces, that custom and statistics, have the last word, it appeals to reason and the will as final arbiters. Recognizing the gap between the lowest and the highest levels of human ability, it is cautious, even pessimistic, about the possibility of reshaping society; but it is hopeful of individuals building the "state within us," of a Socrates living, or dying, for the consistency of his faith in the Good, and dying not in vain.

This Platonism is not a quaint and timid academic survival, but a bold infiltration of philosophy itself into all our contemporary activities and disciplines, a criticism of their trends and standards and objectives. It does not offer itself as an all-sufficient substitute for any or all of them; it does not seek to displace modern philosophy, or modern literature, or the various natural and social sciences, or the religions that claim man's allegiance. It has no ready formula for the

solution of our complex problems of war and peace. But it does bid men examine the very foundations and assumptions of their various speculations and activities in the light of the Good, at the same time that it invites their criticism of itself. Such a seasoned and open-minded Platonism we need today.

NOTES

1. This is a considerably revised version of the Presidential Address delivered before the American Philological Association on December 27, 1951, in Princeton, New Jersey. I have omitted an opening section, which proposed as a common denominator both of the diverse interests of classical scholars and of the problems of the modern world, a Platonism that has been subjected to fair criticism. I have omitted also a brief survey of the earlier fortunes of Platonism in its rivalry with other philosophies, in order to gain a little more space for the treatment of Platonic criticism during the past hundred years and particularly in quite recent times. My purpose is not to attempt any full-scale analysis or criticism of the writings of Plato, but rather to consider briefly the extent to which they provide a valid approach to our contemporary activities and problems; my method is therefore less systematic than protreptic and propaedeutic. Fewer references are made to the well-known and scholarly works on Plato than to some recent works which may help or hinder the student of Platonism in his effort to understand its claims on the modern world.

2. J. A. Stewart, "Plato," in *English Literature and the Classics*, ed. G. S. Gordon (Oxford, 1912), 25-48; J. A. Notopoulos, "The Divided Line of the Platonic Tradition," *Journal of Philosophy*, XXXII (1935), 57-66.

3. A. N. Whitehead, *Process and Reality* (Cambridge, 1930), 63.

4. A. N. Whitehead, *Adventures of Ideas* (New York, 1933), 203.

5. R. Robinson, *Plato's Earlier Dialectic* (Ithaca, 1941), 1-6, lists "at least five ways in which misinterpretation is very common."

6. Cf. G. C. Field, *Plato and His Contemporaries* (New York, [1930]).

7. Cf. J. Stenzel, *Plato's Method of Dialectic* (Oxford, 1940), 1-25.

8. J. Dewey, autobiographical chapter, in *Contemporary American Philosophy*, ed. G. P. Adams and W. P. Montague (New York, 1930), 21.

9. E.g., C. F. Hermann, George Grote, H. Jackson, and (on the whole) Wilamowitz.

10. For convenient summaries, cf. P. Shorey, "The Unity of Plato's Thought" (Chicago, 1904); *What Plato Said* (Chicago, 1933), 66-73; J. Stenzel, *Plato's Method of Dialectic* 23 f; W. Jaeger, "Der Wandel des Platobildes im 19. Jahrhundert," *Antike* 4 (1928), 85-98; Jaeger, *Paideia*, Vol. II (Eng. Trans., Oxford, 1943), 77-97 and *passim*, and literature cited in notes. J. S. Mill's elaborate review of Grote's *Plato (Dissertations and Discussions, 1867, Vol. IV, 280-384)* is still worth reading.

11. R. W. Emerson, *Representative Men* (Boston, 1897), 57.

12. R. W. Emerson, "The American Scholar," (1837).

13. See the correspondence of Thomas Jefferson and John Adams for some entertaining dissenting opinions with regard to the "idealized" Plato. They,

and many others among the "Founding Fathers" who had imbibed considerable Latin and less Greek, were drawn to those authors and ideas which supported their generally liberal position; and Plato did not appeal to them, for reasons which are not far to seek. Others of their period or earlier (William Penn, Jonathan Edwards, Benjamin Franklin, William Bartram) had been more attracted by Plato's mystical and poetic qualities: cf. R. M. Gummere, *Pennsylvania Magazine of History and Biography* 56 (1932), 68-92; *CW* 26 (1932), 57-59. On the great role played by Platonism in Europe, usually till very recently with cordial acceptance, there is neither need nor space here to dilate; the subject has been well treated by J. Burnet, *Platonism* (Berkeley, 1928), A. E. Taylor, *Platonism and Its Influence* (Boston, 1924), and P. Shorey, *Platonism, Ancient and Modern* (Berkeley, 1938), and by many others.

14. Warner Fite, *The Platonic Legend* (New York, 1934).

15. R. H. S. Crossman, *Plato To-day* (London, 1939), 275.

16. B. Farrington, *Science and Politics in the Ancient World* (New York, 1940); *Greek Science: Its Meaning to Us* (2 vols., New York, 1949). F. M. Cornford, "The Marxist View of Ancient Philosophy," in *The Unwritten Philosophy* (Cambridge, 1950), 117-137, most cogently refutes not only Farrington's contentions but similar views expressed by Crossman (see above, note 15) and by G. Thomson in his *Aeschylus and Athens*; by implication he refutes also (in anticipation) much of the work of K. R. Popper (see below, note 18).

17. A. D. Winspear, *The Genesis of Plato's Thought* (New York, 1940); see also his *Who Was Socrates?* (New York, 1939).

18. K. R. Popper, *The Open Society and Its Enemies* (2 vols., London, 1945; 2nd edition, 2 vols. in 1, Princeton, 1950). This is an important and well-documented work, devoted to the exposure of the teachings of certain enemies of political liberalism: notably, Plato, Hegel, and Marx. Much of Popper's positive attitude deserves sympathetic consideration. Unfortunately the argument is vitiated by a violent animus which betrays the author into confusions of thought (fallacious ascription to Plato of historical determinism, or "historicism"; imputation of intellectual dishonesty; tortured interpretations; occasional mistranslation.) It is therefore a book which those who are already familiar with the Platonic text will find stimulating even when its patent unfairness is most annoying; but it can only mislead any novice who may look to it for guidance. There is not space here for detailed refutation; a few references to Popper are made above, pp. 42; 43; 47; 52; 56; 57; 58; notes 23; 69; 94. See reviews of Popper by G. C. Field, in *Philosophy* 21 (Nov., 1946) 271 ff, and by R. Hackforth, in *CR* 61 (Sept., 1947) 55-57, two fair-minded expositions both of Popper's virtues and of his perverse bias; by G. Ryle, in *Mind* 56 (Jan., 1947) 167-172, a temperate and mostly favorable review; and by R. Robinson, in *The Philosophical Review* 60 (Oct., 1951), 487-507, a commendation of the book qualified by explicit recognition of its grave shortcomings. I may mention also two forthcoming books, parts of which refute Popper's argument: J. D. Wild, *Plato's Modern Enemies and The Theory of Natural Law* (Chicago, 1953), and Ronald B. Levinson, *In Defense of Plato* (Cambridge, Mass., 1953).

19. Bertrand (now Lord) Russell, *History of Western Philosophy* (London, 1946), chapters xii-xviii.

20. Here are a few examples of logical flaws in the *Republic*. (a) The analogy of man and state (368 ff) is after all only an analogy, with some of

the dangers that are implicit in all analogies. Cf. N. R. Murphy, *The Interpretation of Plato's Republic* (Oxford, 1951), 68 f; H. W. B. Joseph, *Introduction to Logic* (Oxford, 1906), 492-502. (b) The "method of residues" used (428) to establish the "four cardinal virtues" is fallacious, if it is presumed to be exhaustive. Shorey, Loeb ed., *ad loc.*, calls it "literary machinery"; it is termed "pseudoscientific" by C. W. Larsen, *AJP* 72 (1951), 413; cf. 396. (c) The question-begging phrases "better" and "worse" used of the parts of the self (430e) can, but need not, result in an excessive regard for the intellect as an end in itself rather than as the representative of the whole self; in the political analogue it is only too easy to justify, on similar grounds, the arbitrary authority of the "best." Cf. Murphy, *op. cit.* 26; 32; 44. Cf. also H. W. B. Joseph, *Essays in Ancient and Modern Philosophy* (Oxford, 1935), 84-114; F. M. Cornford, "The Doctrine of Eros in Plato's Symposium," in *The Unwritten Philosophy* (Cambridge, 1950), 68-80, a useful corrective to the harsher aspect of Plato's Trichotomy. (d) The attempt to show that a man's decision not to gratify a given desire, such as thirst (*Rep.* 437-439b), implies a conflict of motives, and therefore two or more parts of the self, is unnecessarily confused or even fallacious; all that need be established is that a desire has *per se* no moral implications, so that if it is denied it must be something else that overrules it. Cf. F. M. Cornford, *CQ* 6 (1912), 260 f. (e) W. F. R. Hardie, *A Study in Plato* (Oxford, 1936), 141-146, argues that the introduction of the "spirited" part of the self in Plato's psychology (439e-441c) becomes necessary only because of an ambiguity as to the highest part of the soul, which at times seems to be that which is common to all men, at other times to be a philosophic, disembodied soul which requires an ally in its struggle with the flesh; Hardie might profitably have compared the *Phaedrus* myth (246a-e) and the nervous system that links brain and muscles. Cf. Joseph, *op. cit.*, 63-75. (f) The contention (477a-480a) that the difference between knowledge and opinion requires them to have entirely different objects is ambiguous, as Plato indeed realizes in the *Sophist* (258a).

21. A. E. Taylor, *Plato: The Man and His Work* (New York, 1927), 162: "Many modern commentators have been badly perplexed by the 'sophistical' character of Socrates' reasoning in the direct reply to Meletus simply because they have not set themselves to realize the difficulty of Meletus' position because of the recent amnesty. They have missed the irony of Socrates' pretense that a prosecutor who is fanatically in earnest is merely playing a stupid practical joke." Cf. P. Shorey, *What Plato Said* (Chicago, 1933), 81 f, on *Apol.* 25c (an "ironically fallacious argument"); on 27e (a "half-serious plea"); 154, on the *Gorgias* (not merely "word-catching arguments, . . . alleged fallacies, . . . captious dialectic," but "dramatically appropriate illustrations of the superior ingenuity of Socrates at this game.") Few readers of the first book of the *Republic* are wholly satisfied by the silencing of Thrasymachus, though real philosophic progress is achieved, for it is largely by means of verbal fencing; but neither is Socrates satisfied at this point. All the remaining books of the *Republic* constitute in a sense the real answer of Socrates to Thrasymachus. Ironical perhaps is the attitude of Socrates or of other characters in the Dialogues who deliberately overstate a case to emphasize a point, by a sort of "shock treatment." Socrates disclaims such bravado, *Apol.* 37a, in proposing a counter-penalty; he is convinced of his own innocence. But he allows himself considerable latitude elsewhere. See further my "The Spirit of Comedy in Plato," *HSCP* 31

(1920), *passim*, for further illustrations of similar methods by Socrates and by the mature Plato.

22. In discussing *sophrosyne* Plato first describes it as a "harmony" of temperamental tendencies (*Rep.* 430e: a democratic view of the self, as of the state), and then suddenly and without warning he terms it a "subjugation" of desires to reason (430e, next sentence), though he hints that in the state the submission of subjects to rulers is voluntary (432a; 433c). This is "The Modification of Plan in Plato's *Republic*" to which R. Hackforth has called attention, *CQ* 7 (1913), 265-272; because Plato persists in developing the second description, he presents both what many readers consider an excessively controlled society and what all must consider an unnecessarily departmentalized psychology of the individual. I have argued in "Plato's View of Poetry," *HSCP* 29 (1918), 29-38; 50-56, that the discrepancy between the treatment of poetry in the second and third books of the *Republic* and in the tenth book can be explained by the new vantage point gained in the intervening, more metaphysical, books: if offered a choice between perfected philosophical truth and the imperfections of extant poetry, Plato will choose the former. But of course the choice is an imaginary one. See also above, p. 61.

23. For example, Crossman and Popper. Fite, however, sees even in Socrates a conceited snob; and Winspear regards him as a turncoat.

24. "At any time prior to the eighteenth century," C. B. Welles has written, "the discipline of economics was hardly isolated from that of politics, and that in turn from ethics. Plato would have agreed with those of us who wish to deal with the social sciences as a unit." ("The Economic Background of Plato's Communism," *Journal of Economic History*, Suppl. VIII [1948], 101.)

25. *Rep.* 578c.

26. A. N. Whitehead, *Science and the Modern World* (New York, 1925), 42f; *The Concept of Nature* (Cambridge, 1926), 17-18; cf. P. Shorey, "The Interpretation of the *Timaeus*," *AJP* 9 (1888), 395-418; "Platonism and the History of Science," *Proceedings of the American Philosophical Society* 66 (1927), 159-182 (esp. 167).

27. *Rep.* 379a; 380d; 613b; *Theaetetus* 176a.

28. *Rep.* 365de; *Laws*, 299d-905d; cf. F. Solmsen, *Plato's Theology* (Ithaca, 1942).

29. H. Cherniss, "The Philosophical Economy of the Theory of Ideas," *AJP* 67 (1936), 445-456.

30. *Theaetetus* 155d-156a.

31. *Politicus* 283d-285c; cf. *Rep.* 504c.

32. *Laws* 716c.

33. J. S. Mill, *Three Essays on Religion: Theism* (1925 reprint), pp. 72-75.

34. For a healthy revolt against the "orthodox" notion that social scientists must not attempt value judgments, see R. E. Smith, "Value Judgments and the Social Sciences," *Bulletin of American Association of University Professors* (Winter, 1949), 628-642.

35. Cf. Barbara Ward, "The Silent Revolution," in *Atlantic Monthly* (July, 1951), who points out the extent to which western thought till recently accepted

economic determinism, but is now recognizing the possibility of moral and political control of economic forces.

36. *Rep.* 571d-572b; the last part of the passage Walter Pater termed "Plato's Evening Prayer." Contrast *Rep.* 571cd; 574d-575a. E. R. Dodds, in "Plato and The Irrational," *JHS* 65 (1945), 16-25, and in *The Greeks and The Irrational* (Berkeley, California, 1951) 207-235, has dealt with the way in which Plato, and indeed the Greeks generally to a far greater degree than we have realized, expressed those obscure levels of human experience which resist every effort toward integration in a rational life. Plato erred, he urges, both by thinking too nobly of human nature and of the intellectual vision of eternal Forms which only the few could hope to achieve, and they only imperfectly (*Phaedo*, *Republic*), and also by thinking too meanly of average humanity, which must live at the level of emotions and psychological strains in conditioned behavior (*Philebus*, *Laws*). Thus all men but the philosopher are on the verge of becoming sub-human creatures, not the possessors of truly rational souls. Even religion is finally transformed (*Laws*) into a cult of the heavenly bodies which might join popular belief and intellectual understanding. (See also below, notes 51 and 78.) K. R. Popper, *op. cit.*, 410-440, "Oracular Philosophy and the Revolt against Reason," is less charitable than Dodds, or even than Plato, toward the "irrationalists." C. Sandulescu-Goieni, *Das Verhältnis von Rationalität und Irrationalität in der Philosophie Platons* (Berlin, 1938), is useful chiefly for metaphysics and epistemology.

37. Walter Bagehot coined the phrase, "the cake of custom"; and W. G. Sumner gave currency to "folkways." Custom, the legacy of countless generations, it is argued most persuasively by Ruth Benedict and Margaret Mead, by Clyde Kluckhohn and Ralph Linton and others, is more powerful in molding the conduct of individuals than reason or biological inheritance, than race or nation. L. A. White, *The Science of Culture* (New York, 1949), who claims that "culturology" is the master science, has devised a simple and thoroughly deterministic formula: $B = f(c)$, or "human behavior is a function of culture." Others are less sweeping in their determinism.

38. R. Benedict, *Patterns of Culture*, (Penguin edition, 1946), 218, 257.

39. C. Kluckhohn, *Mirror for Man* (New York, 1949), 41; cf. 220; 282-286.

40. Margaret Mead, in Kluckhohn and Murray, *Personality in Nature, Society, and Culture* (New York, 1948).

41. C. Kluckhohn, "An Anthropological Approach to the Study of Values," *Bulletin of American Academy of Arts and Sciences* (March, 1951).

42. Cf. R. Linton, *The Cultural Background of Personality*, (1945); Kluckhohn and Murray, *Personality*, etc.

43. Thucydides I. 22.

44. *Laws* 952a-d.

45. Cf. W. Jaeger, "Praise of Law," in *Interpretations of Modern Legal Philosophies* (New York, 1947), 352-375; Joseph P. Maguire, "Plato's Theory of Natural Law," *YCS* 10 (1947), 151-178.

46. *Rep.* 491d-492d.

47. T. D. Lysenko, "The Situation in Biological Science" (Moscow, 1949, English translation of the *Proceedings of the Lenin Academy of Agricultural*

Sciences of July–August, 1948). Soviet science by 1951 girded itself to the purging also of non-Marxist physics. I am reminded of the distinguished historian and amateur gardener who guided my first efforts in horticulture: "It is better," he said, "to plant a \$2.00 rosebush in a \$5.00 hole than to plant a \$5.00 rosebush in a \$2.00 hole." Plato, however, had no easy optimism about the external environment; he knew that real change, at least in the adult, must take place within, and must be the conscious choice of ends seen to be good.

48. Cf. Lord Lindsay of Birker, "The Good and the Clever," Founders' Memory Lecture, Girton College, (Cambridge, 1945).

49. *Rep.* 493a–494a; cf. *Protag.* 324–327, for "cultural conditioning."

50. *Rep.* 505ab.

51. *Politicus* 231–235; 268e–275e; *Timaeus* 29d–30b; 47e–48a; 68e–69a on the non-rational or "roving" cause (necessity, or chance); *Laws* 709ab, on evils due to chance or to "chance together with God." Here Plato has projected into the conception of Nature "that stubborn irrationality which he was more and more compelled to admit in man" (E. R. Dodds, *JHS* 65 [1945] 21). Cf. W. C. Greene, *Moirā* [Cambridge, Mass., 1944], 297–311).

52. *Rep.* 617de.

53. *Laws* 906a.

54. J. A. Stewart, *Plato's Doctrine of Ideas* (Oxford, 1909); Stewart is much indebted to P. Natorp, *Platos Ideenlehre* (Leipzig, 1903; 2nd ed., 1921).

55. Cf. F. C. S. Schiller, *Studies in Humanism* (London, 1907), and *Plato or Protagoras?* (Oxford, 1908); W. C. Greene, *Moirā* (Cambridge, Mass., 1944) 415, Appendix 35; 418, Appendix 42. But see also J. Stenzel, *Plato's Method of Dialectic*, 23–25, for another view.

56. Cf. N. R. Murphy, *The Interpretation of Plato's Republic* (Oxford, 1951) 150; 198–205; Sir David Ross, *Plato's Theory of Ideas* (Oxford, 1951) 24 f; 38 f; 79–81; 111–114; 174 f; 178; 225–245.

57. W. R. Inge, *Platonism in English Religious Thought* (London, 1925–26). P. E. More, in his various works, found in Plato the central figure that molded the Christian tradition.

58. Glenn R. Morrow, "Necessity and Persuasion in Plato's *Timaeus*," *The Philosophical Review* 59 (1950), 147–163.

59. Santayana, *Platonism and the Spiritual Life* (New York, 1927); he begins by quoting from Inge's book, but disagrees with him.

60. G. Grote, *Plato and The Other Companions of Socrates* (3 vols., London, 1865), III, 241 f; cf. Aristotle, *E.N.* I.vi; Mill, rev. Grote, 338, 353–355; Popper, 143, 558, n. 32.

61. *Rep.* 505 ab. quoted above, p. 51. Cf. N. R. Murphy, *op. cit.*, 32 f: 181–186.

62. See further: P. Shorey, "The Idea of Good in Plato's Republic," *Chicago Studies in Classical Philology*, I. (1895), 188–239; *What Plato Said*, 72; 230; *Republic*, Loeb edition (1925), II, xxiii–xlii; J. A. Stewart, *Plato's Doctrine of Ideas*, 49–59; Jaeger, *Paideia*, II, 279–288. P. E. More, "The Demon of the Absolute" (Princeton, 1928), 1–51, rebukes various forms of naturalism and relativism for claiming absolute allegiance; his own allegiance is to a dualism that sets humanism apart from naturalism.

63. *Rep.* 471c-473b. H. W. B. Joseph, *Knowledge and the Good in Plato's Republic* (Oxford, 1948) is a sensible and well informed review of the whole problem.

64. *Rep.* 533c; *I Cor.* 13.10.

65. Crossman, *op. cit.*, 132 f.

66. Popper, 46-57; 154-165. For an antidote, cf. F. M. Cornford, "Plato's Commonwealth" in *The Unwritten Philosophy*, 47-67.

67. Sir Ernest Barker, *Greek Political Theory: Plato and His Predecessors*, Introduction to the 1946 edition.

68. D. Grene, *Man in His Pride*, (Chicago, 1950), 125-163; 177-204.

69. *Rep.* 415bc; 434a; 546a (which does *not* rescind the earlier provision, as Popper says, pp. 138 f, but repeats it in a different form); 547a.

70. *Rep.* 371e-372a.

71. That, after all, is rather different from the Ottoman Empire in the time of Suleyman the Magnificent, to which Plato's state has been compared by A. H. Lybyer, quoted by A. J. Toynbee, *The Study of History*, Vol. III, 33.

72. *Laws* 691cd; 715cd; 761e.

73. *Rep.* 431d-432a; 433c; *Politicus* 276de; *Laws* 645b; 690bc. But Plato does not argue, like Rousseau, that political action of a given kind is right because we are willing to perform it (an emotional test); rather we are willing because it is right. Cf. N. R. Murphy, *The Interpretation of Plato's Republic* (Oxford, 1951), 73-86. See also above p. 60 and n. 94.

74. J. S. Mill, "On Liberty."

75. *Rep.* 401bd. Plato is not explicit as to how generally the young citizens are to receive the early education that he prescribes, and there is much difference of interpretation among modern scholars on this point.

76. Cf. in general Sir W. Moberly, "Plato's Conception of Education and Its Meaning for To-day," Presidential Address, English Classical Association, Oxford, 1944; R. G. Bury, "Theory of Education in Plato's *Laws*," *REG* 50 (1937), 304-320; R. C. Lodge, *Plato's Theory of Education* (London, 1947).

77. Is there any one kind of education that will best train future citizens for leadership? The old struggle between philosophy and poetry (*Rep.* 607c), or between the arts and the sciences as instruments of education, may be on its way toward reconciliation, if extravagant and irrelevant claims on both sides are abandoned and common grounds are discovered. A. E. Housman's scepticism, in his *Introductory Lecture* (1892; Cambridge, England, 1937), about the beneficent effect of classical education on any but the gifted few (and those not the professionals), may be matched by the scepticism of J. B. Conant, in his *On Understanding Science* (New Haven, 1947), about the extent to which the habits of thought and point of view of the scientist can be transferred to other human activities, unless he receives further social education. Learning, whether humanistic or scientific, may be justified as an end in itself; but adaptation and tact and what Plato calls "experience" (*Rep.* 484d; 539e) is required by the liberated prisoner who returns to the Cave to help his fellow-men as scientist or humanist or statesman. See further above, p. 61, and below, n. 97.

78. Cf. E. R. Dodds, *CQ* 65 (1945) cited above, n. 36, on Plato's lack of interest in ordinary men when he was most concerned with eternal things. "The less Plato cared for actual humanity, the more nobly he thought of the soul."

79. *Laws* 643e; 811e.

80. 942a-d.

81. Popper, *op. cit.*, 9; 101-105.

82. A modern warning is to be read in F. Lilje's *The Abuse of Learning* (New York, 1948), which traces the rise and the glory of the German Universities as strongholds of humanistic learning and education, and their transformation into purely intellectualistic centers of research, till they were ripe to be exploited by the Nazi state. The aftermath is a German population still docile but as yet inadequately educated in self-direction.

83. *Laws* 908a-909b; cf. 961c; dismissed too lightly by C. Ritter, *The Essence of Plato's Philosophy* (1933), 382; Shorey, *What Plato Said*, 391f, 398; better, Barker, *op. cit.* (above n. 67), 363-368; Taylor, *Plato: The Man and His Work*, 493 f; *Platonism and Its Influence*, 109-113.

84. *Crito* 50b.

85. In the *Protagoras* Myth, which owes at least as much to Plato as to Protagoras, Zeus is represented as ordaining that *aidos* and *dike* be distributed among all men, "for cities cannot exist if a few only share in the virtues, as in the arts. And further, make a law by my order that he who has no part in *aidos* and *dike* must be put to death, as a plague of the state" (323d). But though *aidos* and *dike* are thus generally shared, Protagoras goes on to argue that these gifts are not given by nature spontaneously, but as the result of study and practice; which is the justification for the punishment of those who are impious and unjust, as responsible but delinquent moral agents (323c-324d).

86. *Rep.* 371c-e; 495de; 590c-e.

87. *Rep.* 434a-c.

88. *Rep.* 555b-562a.

89. *Rep.* 558c. Cf. G. Morrow, "Plato and the Rule of Law," *Philosophical Rev.* (March, 1941), 105-126; C. Murley, "Plato's *Republic*: Totalitarian or Democratic?" *CJ* 36 (1941), 413-420; J. P. Maguire, "Some Greek Views of Democracy and Totalitarianism," *Ethics* (Jan. 1946), 136-143.

90. *Politicus*, 302b-303b.

91. *Laws* 757a: "The equal treatment of unequals must produce inequity"; cf. Aristotle, *E.N.* 1131b27; 1158b30; *Pol.* 1301b29.

92. *Laws* 692a.

93. Cf. Morrow, *op. cit.* above, n. 89; and "Popular Courts in Plato's *Laws*," *Scientia* (April, 1951), 145-150.

94. See above, p. 57 and n. 73. Popper, who cites *Laws* 690 bc, on his p. 77, nevertheless thinks, *ibid.* 489, n. 6, that the *Laws* "is, if anything, more hostile to the spirit of democracy" than the *Republic*, for which cf. Popper 46-57.

95. W. C. Greene, "Plato's View of Poetry," *HSCP* 29 (1918), 1-75; "The Greek Criticism of Poetry," *Harvard Studies in Comparative Literature* 20 (1950), 19-53.

96. Cf. W. C. Greene, "The Spirit of Comedy in Plato," *HSCP* 31 (1920), 63-123.

97. *Symp.* 210a-212a. Cf. M. Johnson, *Art and Scientific Thought* (New York, 1949), and my review of this work, *Speculum* 25 (1950), 136-138. Albert Schweitzer has remarked, *Out of My Life and Thought* (New York, 1949), 63, that "all utterances about art are a kind of speaking in parables." For the rest of the foregoing paragraph, which says in shorthand what needs to be expressed in a book, see further, besides my two papers already cited: W. Pater, "Plato's Aesthetics," in *Plato and Platonism*; J. A. Stewart, *Plato's Doctrine of Ideas* (Oxford, 1909), Part II; J. A. Stewart, *The Myths of Plato* (London, 1905); P. Stöcklein "Über die philosophische Bedeutung von Platons Mythen," *Philologus*, Supplementband 30, 3 (1937), with my review, *CP* 33 (1938), 221-225; J. A. Notopoulos, "The Meaning of Eikasia in the Divided Line of Plato's *Republic*," *HSCP* 44 (1933), 193-203; Notopoulos, "The Symbolism of the Sun and Light in the *Republic* of Plato," *CP* 39 (1944), 163-172; 223-240; W. C. Greene, *Moirai* (1944), 419 (Appendix 44); W. Jaeger, *Paideia* II, 221-230; 285-298; 358-364; III, 228-230; 237 f; 255; V. Goldschmidt, *Le Paradigme dans la Dialectique Platonicienne* (Paris, 1948); L. Louis, *Les Metaphores de Platon* (Paris, 1945); also works cited in these. For a guarded definition of analogy, see Rev. Gerald B. Phelan, *St. Thomas and Analogy* (Milwaukee, 1941), 23.

98. *Rep.* 414b-415d; Grote, *op. cit.* (above, n. 60), III 183; Fite, chapter ii; Winspear, *Genesis of Plato's Thought*, 223, 225; Farrington, *Science and Politics in the Ancient World*, 92-100; Popper 137-141. Emerson wrote (*Representative Men* (Boston, 1897), 87), "I am sorry to see him, after such noble superiorities, permitting the lie to governors. Plato plays Providence a little with the baser sort, as people allow themselves with their dogs and cats." Even Toynbee (*Study of History*, I, 249), missing the point of the myth, interprets it as "a deliberate and cold-blooded piece of deception, in which the differentiating effects of 'upbringing and education' are mendaciously ascribed to pre-existing differences of a racial order." But cf. Cornford, "The Marxist View of Ancient Philosophy," in *The Unwritten Philosophy*, 127-137.

99. *Rep.* 389b; cf. *Laws* 663d; contrast *Rep.* 382a-c.

100. Cf. Moberly, *op. cit.* (above, n. 76), 28.

101. *Laws* 817b; contrast *Rep.* 378e.

STYLISTIC PROBLEMS IN GREEK AND ROMAN ARCHAISTIC RELIEFS¹

By CHRISTINE MITCHELL

THE evolution of Greek sculpture has rightly been described as the progression towards the naturalistic portrayal of the human form. The city of Athens itself was the artistic center and the cultural leader. Its major sculptors, from the archaic through the Hellenistic era, worked unconsciously upon the premise that a truthful and realistic understanding of physical form was their objective and that its study should never be sacrificed for what was merely playful or decorative. The essential feature of the classical tradition is a search for form as it is interpreted and aided by objective vision and knowledge.

By the conclusion of the Hellenistic period and the advent of the Graeco-Roman epoch, Athens had ceased to be the creative center of the arts, and, instead, gave herself to the revival, repetition and dissemination of the classical tradition as it had been established in the preceding centuries. The experimentation, the drive, the inner integrity, if you like, of the sculptor were abandoned, and with these his insistence upon a profound articulation of the sculptured body.

One of the more significant aspects of Athenian classicism is archaistic sculpture. It was produced in vast quantities and exported during the first century B.C. when Rome bowed to the superior taste of Athens. The first purpose of this paper is to examine two works of the archaistic style which were executed in the epochs before the ascendancy of the Romans, and which were motivated by those forces and inspired by those traditions which had already found expression in the major productions of Greek sculpture.

Archaistic sculpture, as an episode in Greek art, opens long before the Graeco-Roman period — and possibly within the period of the archaic itself. By the fourth century its character can be confidently described; in the subsequent eras examples become increasingly frequent, until, in early Roman times its full meaning is underlined. In its first pre-Roman phase, the episode is primarily revivalistic in nature — imitative but not copyist. The archaic style was imitated in both relief and round sculpture. But the most individual and most interesting aspects belong to examples in relief. This is because

considerations of medium and method in relief presented the more serious set of problems. Consequently certain stylistic qualities which are apparent in reliefs are absent in round sculptures. We will confine ourselves to the area of archaistic relief alone, and our conclusions will lean heavily upon artistic method and procedure. Indeed, it may be that the study of archaistic sculpture as a whole can never be very rewarding aesthetically; its most challenging features are those of its inherent technical problems and motivation.

The search for and conception of form, known to us through the many major works of sculpture, alter drastically between the archaic and late Hellenistic times. There is a progression from the two-dimensional, linear, and static to the three-dimensional, spatially liberated volume. Even a less important phase of Greek sculpture — such as the archaistic — should reflect the changes found in the more monumental and undoubtedly superior pieces. Although the evolution of the classical tradition in major Greek sculpture proceeds gradually and logically, with all elements of technique, formal conception, and objective moving in the closest harmony and at the same level, we must not expect the archaistic, with its many ingredients of primitivism, modernism, and novelty, to proceed as comprehensively. Rather, clashes and oppositions are the keynotes of its development.

To explain these oppositions, we must turn our attention to the archaistic sculptor's special problems. With the same objective before each generation — of reviving, imitating or exploiting the sincere archaic style — the method of so doing will be in each case of a different kind. The linear and three-dimensional will war with each other, meet at points and in odd manners; one or the other will dominate — with good or bad results. As the sculptor's conception of form advances, his difficulties in imitating a more primitive style should increase perceptibly. Thus, the earliest stages of archaistic relief should contain fewer disturbing elements because the three-dimensional conception is not yet the dominant one and the imitation of a linear style should not be too formidable a task. But, later, the sculptor's problem became one of enclosing figures, which by this time were essentially conceived as existing in three-dimensional space, within a single two-dimensional plane. By the very nature of his goal — to imitate the archaic — he dare not invent a new mode of relief more appropriate to his artistic conceptions. Instead he must compel the physical form, which had gradually and irrevocably been released from its spaceless background, to return to its former imprisoning mold. To replace it, unresisting, was impossible — unless



FIG. 1. Marble Tripod Base. Agora Museum,
Athens. Herakles.



FIG. 2. Marble Tripod Base. Dionysos.
Photographs courtesy of Alison Frantz.



FIG. 3. Marble Tripod Base. Maenad.



FIG. 4. Four Gods Base. Acropolis Museum.
Hephaistos.

Photographs courtesy of Alison Frantz.



FIG. 5. *Four Gods Base. Athena.*

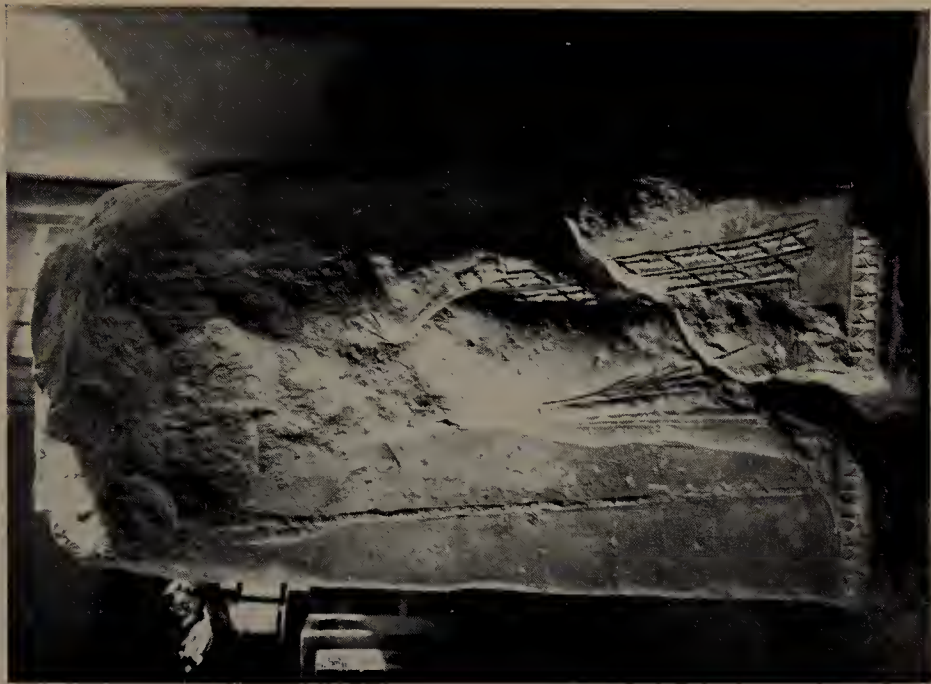


FIG. 6. *Four Gods Base. Zeus.*
 Photographs courtesy of Alison Frantz.



FIG. 7. *Villa Albani 991. Athena.*
After E. Schmidt, *Archaistische*
Kunst, Pl. IX (3).



FIG. 8. *Villa Albani 988.*
Photograph courtesy of International Association of
Classical Archaeology, Rome.

tricks were employed or sacrifices made. At the height of the collision between the old and the new conceptions, tricks actually were employed, and, at the conclusion of the style, sacrifices were indeed made. It is exactly because the round statue does not need to be put back into its archaic two-dimensional plane, that it escapes the treatment and tricks required for the reliefs.

The height of the collision may be splendidly illustrated by examining the reliefs on a marble tripod base,² part of a choregic monument, in Athens. The base was found in 1933 in the ancient Agora, and it stands now in a courtyard of the Agora excavation house. It is decorated with three reliefs,³ representing, it is believed, Herakles, Dionysos, and a Maenad.

The formal conception of the figure of Herakles (Fig. 1) is our first concern. It is a fully three-dimensional one and it is undeniably from a very advanced period in the evolution of Greek sculpture. Although Herakles is placed as if moving parallel to the background, in the manner of archaic relief, the modeling of the anatomy is very much developed and provides such a strong impression of volume conceived from every side that the figure refuses to appear confined in its movement to the surface plane. There is, at the same time, a certain elasticity and free association of the physical elements which indicate that the sculptor saw the torso, legs, and arms as revolving easily upon and away from each other, in and out of space. The chest is swung around towards the spectator at an angle in complicated relation to the muscles of the abdomen, thighs, and buttocks. The same characteristic can be noted in the area around the knees — in the mobility of the joint, even in its attenuation, and in the turning out of the lower part of the leg. There is also a stretching and change of angle at the ankle and foot. The drapery too is given undisguised three-dimensional treatment. The depth and enclosing capacity of the chlamys are revealed by the thick club which passes under it and by the deep oval, created by its folding, which is thrown into shadow.

The same sensitivity to three-dimensional volume is fully apparent in the second figure, Dionysos (Fig. 2). It is still there in the Maenad (Fig. 3), though less obviously because her body is more concealed by her garment. However, a quality which we have not yet noted, and which is present in all three forms, is the strange distortion or exaggerated muscularity of the limbs — and indeed of the whole figure. A small proportion of this may be accounted for by charging the sculptor with a penchant for affected elegance and mannered poses. But there are two other possibilities. First, in order to imitate the

clear patterned character of archaic relief, the sculptor purposely swelled the muscular outline and as a result the shapes within would be emphasized. Secondly, since the linear and the naturalistic are opposed to each other at the outset, the battlefield would have to be precisely at their points of meeting — along the contours. The rigid outline had to assert itself somewhere along the areas where the sculptor supposed the three-dimensional shape was to stop and the two-dimensional surface of the background was to begin. Because his eye at all times fled quickly around the shapes and contours, he could never clearly decide where that point of stopping should be. He thus leaves off his modeling at different depths of the form, and relationships which would have been clarified in space are knitted into and distorted by the firm outline.

These three considerations seem to me to provide plausible explanations of the distorted and mannered poses of the archaistic figures as they appear in the Agora reliefs. A further and desired result of the treatment is to create the feeling of stiffness — a kind of frozen quality which vaguely resembles the real archaic. But since it is the freezing of several complex visual impressions of a physical form, and not the geometric fastening of a single conceptual image, we are unnerved by effects of artificiality in the pose.

Let us now turn to an analysis of the handling of drapery. I will leave aside for the moment the Herakles relief because his cloak is not rendered in the archaistic manner — and perhaps we will find a reason why it is not. In the figure of Dionysos (Fig. 2), the drapery is massed into a long thick single fold which starts under the center of the chest and follows through the natural median of the body — that is, from between the breasts, over the navel, and between the legs. Subsidiary folds echo this main one by radiating out at slight angles in the regions around the stomach and thighs; then they move in close again to the central fold. Finally two or three last ripples are allowed to spread once more at the shin. However, the central fold remains dominant and forms a very strong vertical which seems to decide its own course with little sympathy for the contours of the body. The movement of the whole cloak which Dionysos wears is, by logic, decided by the direction in which he walks — from the right to the left. But the large amount of drapery which should flow freely behind him, as in a train, is made to conform to a linear pattern and is held within a well-channeled system of zigzags, creating an almost static motif in itself, pressing firmly against the legs of the god, and largely disregarding the direction of his movement.

The cloak is intended to be transparent or very thin, for the legs, knees, muscles, and thighs clearly reveal themselves. It is tightly wrapped over the body and the folds are suppressed in many places in order that they may express and not conceal the form. If such attempts are made to put the drapery at the service of the figure in some areas, it seems strange that in others — in the central fold and train — it becomes negative and even disturbing. For one thing, the massing appears too suddenly, too illogically, and too thickly, out of a fine material which is stretched cleanly over limbs and body. It is almost as if we were dealing with two different kinds of fabrics. The same is true for the lower section of drapery on the Maenad (Fig. 3). The drapery seems to be required to fulfill two distinct functions which work against each other. One is to give a full explanation of the rounded contour or shape; the other is to submerge or confine them in those areas where the form would break free, if allowed to, from its background.

Before I discuss more fully the second function, we might remind ourselves that in neither archaic, nor classical, nor in even later major Greek sculpture, do we observe contradictions in the handling of drapery — no matter how transparent it might be. Both the direction and the treatment of folds were harmonious with the pose of the figure. Although drapery and body might be separate considerations, they were never independent ones. Within the archaic period itself, it is possible to find the same massing as we do in the archaistic. The channeling, however, is never carried out with disregard for the action of the figure, and massing, never extreme or discordant, occurs only where the non-transparent drapery gathers naturally between the contours of or off the surface of the figure.

Can we explain the presence of these drapery motifs in our reliefs which appear to function independently of and at odds with the rest of the figure? In the first place, the motifs themselves — the central fold, the zigzag, the swallow-tail — are borrowed from the decorative vocabulary of the archaic. Their very presence, almost regardless of their rendering, instantly provides the flavor of the earlier style.

But each motif has further reason to be adopted by the archaistic sculptor. The central fold, in the archaic, is the outcome of the symmetrical dividing of the human form and the desire to stress frontality and perpendicularity. The train motif, so frequent in archaistic reliefs, is derived from the archaic system of accenting the architectonic structure of the body. For instance, the korai, when observed in profile, have their full skirts in their left hands and hold them with

the folds zigzagging and cascading down the exact median line of their bodies. The swallow-tail, in the extreme form in which it is depicted in the Maenad, is non-existent in the archaic period. But the motif is taken undoubtedly from the overlapping of the chiton which falls to just below the waist in archaic korai. In our relief, the ends of the overlap are pulled down and out and extend unnaturally far beyond the contours of the body. This is not only for the sake of elegance and embellishment.

Each of these motifs is used for the same reason as they were in the archaic: to emphasize the symmetry and divisions of the body. But the result is vastly different, and ultimately jarring. A three-dimensional figure is unwilling to have a geometric pattern imposed upon it, and, in fact, the attempt is fruitless. The independence and the inappropriateness of the central fold in the Dionysos (Fig. 2), which is not bound up with its real functional setting on a geometric form, is thus fully and discordantly felt. And certainly one of the reasons for the superfluous character of his train is that it fails to fall in its logical and original position against the side of his left leg. The extent to which the archaistic sculptor will imitate the symmetrical arrangement of archaic drapery, without reference to the anatomy beneath, is finally attested by the Maenad relief (Fig. 3). The line of the overlap below her waist takes its own preconceived pattern of rising and falling folds within equal intervals—with attention perfunctorily steadied upon the surface contours of the figure, but not at all upon those of the outer contours which would establish three-dimensional form or recession. For example, an extra loop in the overlap should have been added if the sculptor was either directly copying an archaic original or following the logic of symmetrical folds circumventing a figure. By leaving out this loop he stresses the linear pattern of the blouse, and gets directly across to the flat background without having to disrupt the play of line by first describing the contour of the left hip.

This introduces another possible motivation for the strange and contradictory handling of drapery. The motifs actually enable the sculptor to anchor his three-dimensional form into the two-dimensional background. Drapery, in stone relief, can be made to take as many folds, ribbings, overlappings, and zigzags as the sculptor deems necessary to accumulate, so to speak, a linear effect and at least a superficial illusion of the archaic style. Such linear arrangements, especially when carried from the figure to the background, as in the Maenad, can ease the figure into its setting, and can provide transi-

tional areas between the roundly modeled body and the flat surface behind it. And now we can explain, in part only, why the rendering of Herakles' chlamys is completely plastic: it was impossible for it to function as a transitional area since it does not, except in one small section, pass over the figure and across to the background. Preferring to use the traditional characterization — in pose and garment — for Herakles, the sculptor has no excuse for superimposing upon the figure geometricized drapery patterns. The result is that this relief is less archaistic in style than its two companions.

Another point of conflict between form and drapery is produced because the archaistic sculptor saw, very rightly, that the most obvious means of imitating the archaic was to fasten on pattern and design, or, in respect to the whole relief, upon outlines. He is not certain, however, which outlines he should have dominant — those of the body itself, or those of the drapery. When radiating bits of folds start out thickly around the loin or along the shin, as in both Dionysos (Fig. 2) and the Maenad (Fig. 3), they end abruptly in order to maintain the clear profile of the whole leg. Yet in most cases, as in the central folds in the Maenad and Dionysos and the latter's train, the shapes of the drapery combinations are nearly as strongly profiled as the limbs. As a result, a series of spatial confusions arises between the drapery and the figures. Perhaps the actual quantity of the drapery combinations was increased — for example, in Dionysos' train — to enlarge the area where linearism could be used. But since none of these motifs is sufficiently two-dimensional to hold its proper place in relation to the contours of the figure, the spatial logic of the whole relief is disrupted. To anchor completely the form and to avoid spatial dislocation, it would have been wiser, perhaps, for the sculptor to be more rigidly linear in his total handling of the drapery, and to sink folds and zigzags more deeply into the background. However, that would have aggravated, beyond hope, his dilemma.

The Agora base illustrates, as I have said, the primary collision in the archaistic style as we see it before the Roman period. The collision, in sum, can be described as the opposition between the two- and three-dimensional conceptions, or, more specifically, the discordances which arise when a geometric designing of drapery is superimposed upon a figure which has outgrown or is unsuitable for such a simple schematization.

The question arises as to how far this theory can be applied to other examples of the archaistic relief style of the pre-Roman periods. We must admit that certain conditions and limitations must be made.

It can be applied only to those pieces which are undeniably superior in quality — that is to those which reveal that the sculptor understood anatomy and form in a manner approaching that of the best sculptors of his period. A great many archaistic reliefs are thought to be dated after the classical period. By the fifth century anatomical investigations had passed beyond the elementary stages and, after this, both the employment and the enlargement of this knowledge were required and anticipated. Some approximation to objective vision had been won and this set the tone and course of subsequent Greek sculpture from then until the Roman period. Therefore, any examples which betray a retarded understanding of physical form, or no desire to deal with it in a realistic way, cannot be so clearly subjected to this sort of analysis. For if the structure of the body is either disregarded or treated shabbily, a geometric superimposition of drapery will not bring forth those tensions which I have described. Unfortunately, many archaistic reliefs which we know belong within this inferior category.

However, one example fulfilling our requirements of excellent workmanship is to be found in the Four Gods base ⁴ in the museum on the Acropolis in Athens. Four single figures are represented in relief: Zeus, Athena, Hephaistos, and Hermes.⁵ The relief of Hermes is too much destroyed to be of use to us in this paper. But Hephaistos (Fig. 4), a figure comparable in pose to the Herakles, will help us to arrive at an idea of what understanding of form and volume is exhibited here.

We first notice how much more simple and unified the whole form appears. The conception is essentially architectonic. The three-quarter position is maintained throughout the length of the figure, and the shapes of the chest and torso move smoothly into the outlines of buttocks and legs. We are not aware of complicated twists in any part of the anatomy. Rather full, continuous curves from head to foot seem to enclose the figure into a single forward motion — a motion which confines itself along the plane of the background. Tension and energy are distributed evenly over the whole to achieve the simple sensation of an unimpeded stride. Notice, by contrast, the jerky and disrupted concentrations of energy in the Herakles, who, though not moving, is yet unrelaxed as he leans against the club (Fig. 1).

Because of its architectonic structure, the figure of Hephaistos is much more at home against its background. The exaggerations of muscles and distortions which were found in the Herakles are wanting because the form adheres to and becomes an actual part of its setting

along a straighter and steadier contour line. Serious manipulations of the figure were unnecessary. Whatever appears to be extravagant in the modeling of either this figure or the others of the base is, I believe, the result of the sculptor's preference for fluid curves and elegant poses — a preference also observed in the Agora base.

We could continue by comparing the figure of Athena (Fig. 5) with the Maenad, and Zeus (Fig. 6) with Dionysos to illustrate further, both in general and in detail, how unlike are the formal conceptions in the two bases. But our results would be the same, and our conclusion unaltered: that certainly the Four Gods base was executed during an epoch when the understanding of form was less three-dimensional — or less advanced.

How do the figures, then, take a schematized and archaic arrangement of drapery? The same motifs are employed: the central fold, the train and the swallow-tail. In each case, in the Hephaistos, Athena, and Zeus, the central fold falls more naturally and sympathetically along the median line, following the contour down the length of the whole figure. The perpendicular and linear drapery of Athena's chiton corresponds with her upright and architectonic pose. Compare this to the Maenad where perpendicular and patterned folds seem out of keeping with the roundness and freely-moving quality of her limbs. The acid test comes when we compare the two almost identical figures of Zeus (Fig. 6) in the Acropolis base and Dionysos (Fig. 2) of the Agora base. Differences are more subtle, and unfortunately we are hampered by the fragmentary condition of the Zeus. However, it is probably legitimate to say that the manner in which his legs are sculpted and the way in which the central fold falls between them present the more unified approach to drapery and form. The left thigh swells at a point in keeping with the three-quarter view (whereas in the Dionysos, the swell begins too high), and it correctly establishes the furthestmost plane; the central fold then comes forward, and finally the right thigh comes even further, and properly so, into the highest plane. There is no confusion in the spatial position of the central fold, and no tendency for it to form an independent movement. The train is smaller in area than in the Dionysos, and is decidedly more two-dimensional. It keeps well behind the figure, because of its linearism and because its outlining is not blurred by the outer profile, which is strong and dominant, of his left leg. Notice, on the other hand, the more hesitant and weaker outline of Dionysos' leg, the overplasticity of the train; and the consequent dislocation of planes which I have already mentioned. Finally, in all the reliefs,

the transitions of the drapery, from areas where it is massed to those where it is drawn closely over the form, is more gradual.

We have left aside, until now, the question of the dating of both the Agora and the Four Gods bases. The latter has been placed ⁶ to about 390 to 370 B.C. largely by comparing its ornamental border with the moldings on the temple at Tegea. I see no reason why this dating should not be accepted. The Agora base has been put tentatively in the first century B.C.⁷ Although it is not my purpose to deal with the problem of its exact date, I would, nevertheless, bring it up to an earlier time — and by all means before the Roman period in Athens, chiefly because it belongs, in its main elements, with the archaistic reliefs executed before the Graeco-Roman era. The two bases are clearly far apart in time, perhaps by as much as two centuries, if we compare, as we have, their formal and particularly three-dimensional qualities. But the chronological distance between them is less important for our purposes than their stylistic similarities, which can be put down to the fact that each belongs within that long period when Greek sculptors were preoccupied with form. Proof of this is supplied because we are able to subject each one to the same stylistic analysis to illustrate that they were derived from common principles and motives. Each expresses a certain monumentality and seriousness which tie them in with the traditions of Greek sculpture as they existed before the Roman era, and before a really narrow classicism had inflicted itself upon the minds of the sculptors.

To clarify what I mean, we might now turn to one or two examples dating from the Graeco-Roman period where the archaistic manner appears in quite a different form and is, in fact, the result of a very different cultural atmosphere. These examples were found in Rome. Although they may be either of Athenian workmanship or directly inspired by Athenian prototypes, their provenance suggests that they were ordered and imported by Roman patrons.

A portion of a bas-relief of Greek marble in the Villa Albani (no. 991) ⁸ in Rome represents Athena (Fig. 7) advancing towards a candelabrum. The effect of the relief is outstandingly decorative, especially when we compare this figure with the Athena of the Four Gods base or the Maenad on the Agora base. We notice, on the one hand, what is an ostentatious handling of drapery over a weak anatomical structure, and, on the other, what is sound form modeling to which are added drapery embellishments. In the Villa Albani no. 991, the anatomy is cursorily and incorrectly dealt with. For instance, her right leg bears no organic relation to the torso. The chief

effect is achieved by the artful manipulation of folds, which create, in the main, a surface pattern of lines. There is here no problem of enclosing a three-dimensional form into a two-dimensional setting, and the arrangement of the archaic drapery motifs, although mannered, does not seem inconsistent with the rendering of the body. The anatomical exaggerations which we see are entirely arbitrary and artificial and were, in all likelihood, taken from an earlier or pre-Roman archaistic relief where exaggerations were the legitimate outcome of a clash in conceptions. The pose here is sophisticated and unreal to a degree far exceeding the relatively sober stances of our figures. The total impression is too smooth, hard, and over-tidy.

A second typical example from the Graeco-Roman period is another relief (no. 988) from the Villa Albani.⁹ This is a bas-relief (Fig. 8) of Italian marble, and represents, in procession, the four gods Hermes, Athena, Apollo, and Artemis. It is more eclectic and classicistic in that it employs late fifth century statues (a habit of the Neo-Attic sculptors) in semi-archaic poses and garments. But its character, though less two-dimensional, is the same as in no. 991: dryness of conception, perfunctory and untrue modeling, and a sleek, polished handling. The chief objective was the hasty decoration of a surface.

This is the archaistic style as it is more commonly known, and at the conclusion of its formulation. In the earlier works, we seem to detect the integrity of the sculptor and his problems in imitating an earlier art form, even while he cannot avoid reflecting his more immediate heritage. The Agora and the Four Gods bases have the excitement of a style in the process of creation — and the clashes we have observed are not only interesting but fundamental. The second half of the story of the archaistic is told in the late examples. Now there is an emphatic note of impersonality, or mere copyism, and of the facile skill which comes from a competent technique and repetitive performance. The traditional analysis of form seems to have been abandoned — unreluctantly — and the earlier archaistic style, which had its own kind of grandeur, is reduced to a level of achievement usually associated with the minor decorative arts.

The collision theory which is applicable to the best of the pre-Roman reliefs cannot in any respect be applied to the Graeco-Roman works. With the relaxation of the artist's concern with physical form, and instead, his contentment with rendering only the mildest approximation of anatomy, the two-dimensional design became a self-sufficient end, and one fully appropriate and easily amenable to rapid production and reproduction.

NOTES

1. I would like to thank Professor George Hanfmann for his helpful comments on the first draft of this paper, and for his general encouragement.

2. Agora Museum no. 7327 (Ht. 1.09m, W. 0.65-0.66m). See *Hesperia* 4 (1935) pp. 387 ff., figs. 15-17; *AJA* 37 (1933), p. 549, fig. 4B; *Art and Archaeology*, XXXIV, 6 (Nov.-Dec. 1933), p. 295. For a discussion on a recently discovered relief and the archaistic style, see *Hesperia* 20 (1951) pp. 16 ff.

3. My thanks are due to Professor Homer Thompson for permission to publish the photographs of this base, and for his advice and help when I began my study of it at Athens.

4. Acropolis Museum no. 610 (Ht. 1.17m, Br. 0.56m, Th. 0.52m), Pentelic, found on Acropolis 1857. See G. Dickins, *Acropolis Museum Guide*, I, 141 ff.; E. Schmidt, *Archaistische Kunst in Griechenland und Rom* (Munich, 1922) pp. 18 ff.

5. Thanks are due to Mr. John Miliades, Ephor of Antiquities, Acropolis Museum, for permission to publish the photographs of this base.

6. See Schmidt, *op. cit.*, pp. 18 ff.

7. See *Hesperia* 4 (1935) pp. 387 ff.

8. Morcelli - Fea - Visconti, *Description de la Villa Albani aujourd'hui Torlonia* (Rome 1869).

9. *Ibid.*

THEOPHRASTUS ON THE PRESOCRATIC CAUSES

BY JOHN B. McDIARMID

THE most important ancient writing on the history of European thought was the *Physical Opinions* of Theophrastus.¹ In this work of sixteen or eighteen books Theophrastus gave for the first time a systematic treatment of earlier views on the main problems of science and philosophy. Its influence in antiquity is attested by the frequency and respect with which it was referred to by later ancient writers. But its unique position was not fully appreciated by modern scholars until Usener² collected the fragments of it and Diels scrutinized these fragments in relation to the large body of other doxographical writings. Diels proved that these writings, far from being isolated and independent, were virtually all derived directly or indirectly from the *Physical Opinions*.³ This fact has been of great consequence for the evaluation of both the doxographers and Theophrastus. Statements of such writers as Aetius have been invested with the full authority of Theophrastus, and, on the other hand, this authority has seemingly been enhanced by the very number of the doxographers who accepted it. When a report has been traced back to the *Physical Opinions*, scholars have been satisfied that it has been traced to an "unimpeachable source" and that it "must have been based on direct acquaintance" with the original Presocratic writing.

That Theophrastus himself was not isolated has long been common knowledge. Parallels between his statements and those of Aristotle have frequently been noted by Zeller and others. Two years before Diels published his *Doxographi Graeci* Zeller presented a paper in which he called attention to the similarity between certain fragments from the first book of the *Physical Opinions* and Aristotle's survey of earlier causal theories in *Metaphysics A*; ⁴ and in his notes to the *Physical Opinions* fragments Diels indicated further parallels. Zeller's conclusion was "Theophrast habe sich in seiner Übersicht über die Geschichte der Physik, trotz der Selbständigkeit seines Wissens und seines Urtheils, die er auch hier an der Tag legt, und trotz der Modifikationen, welche die eigentümliche Natur seiner Aufgabe nöthig machte, an die Übersicht über die philosophischen Principien, die Aristoteles im ersten Buch der Metaphysik gegeben

hatte, in umfassender Weise angeschlossen." ⁵ This has been the general view. The similarities between the statements of Theophrastus and Aristotle have been seen not as disproof of Theophrastus' value but, rather, as corroboration of Aristotle based on an independent judgment of the original evidence. Indeed, Theophrastus has been regarded as the more trustworthy witness of the two; for, while it is granted that Aristotle's statements about his predecessors may be colored by his own philosophical bias, it is maintained that Theophrastus is an objective historian and, therefore, free from this fault.

The question of Aristotle's bias has been dealt with exhaustively by H. Cherniss in his *Aristotle's Criticism of Presocratic Philosophy*.⁶ Cherniss has found that Aristotle's accounts of earlier doctrines are so inextricably bound up with arguments for his own doctrine that history cannot be easily distinguished from interpretation. Aristotle is not interested in historical facts as such at all. He is constructing his own system of philosophy, and his predecessors are of interest to him only insofar as they furnish material to this end. He believes that his system is final and inclusive and that, therefore, all earlier thinkers have been groping toward it and can be stated in its terms. Holding this belief, he does not hesitate to modify or distort not only the detailed views but also the fundamental attitudes of his predecessors or to make articulate the implications that doctrines may have for him but could not have had for their authors. His method of dealing with his predecessors is to set up debates between them. Each debate is resolved in the formulation of one of his own theories, and the grouping and sentiments of the participants vary as the predetermined solution of each debate requires. Thus, there is no constancy in the historical value of his comments; nor is there even such a thing as *the* Aristotelian interpretation.

In this respect the survey of *Metaphysics* A is no different from similar passages found elsewhere.⁷ There Aristotle marshals the early doctrines in such a way as to establish that all philosophers have been seeking, knowingly or not, to achieve his system of four causes and that none had ever put forward any other type of cause than these. Behind his argument is the assumption that the main problem of earlier philosophy was causality and that the cause that first and chiefly engaged the attention of the Presocratics was the material cause. The Presocratics as a group are set up as champions of matter, and on the opposing side is Plato, who is champion of the formal cause. The opposition is resolved by Aristotle's synthesis of matter and form. As Cherniss has said, Aristotle's purpose makes it natural

that the details of his account should be unhistorical, and it is not surprising to find that the fragments of the Presocratics do not confirm the view that their interest was primarily in the material constituents into which existence could be analyzed. Further, although this particular interpretation of the Presocratics runs through many of Aristotle's discussions, this fact does not lend greater weight to it. Each instance is explicable by the argument in which it occurs, and, when it does not suit the argument, Aristotle modifies or abandons it.

One result of Cherniss' findings is that further investigation must be made of the relationship of Theophrastus to Aristotle. It is no longer possible to suppose that the similarities between their accounts of the Presocratics are due merely to agreement on specific historical data. Nor is it enough to explain these similarities as being due to the influence on Theophrastus of Aristotle's "bias for the abstract and metaphysical point of view." In each case the Aristotelian passage that Theophrastus has used must be examined in its context with regard to the purpose of Aristotle's argument, the assumptions on which he is proceeding, and the particular distortion of the early doctrine that has resulted therefrom; and each interpretation must be seen not only in relation to the fragments of the Presocratics themselves but also in relation to the other interpretations of Aristotle which Theophrastus may or may not have adopted. To be complete this investigation must ultimately include the writings of the later doxographers as well as the fragments of Theophrastus. But each doxographer raises individual problems in addition to those that are due to the common dependence on Theophrastus' work. The first step is, therefore, to consider the attested fragments from the *Physical Opinions*. The present study will be further limited to fragments on Presocratic causes from the first book of this work. This choice has been made not only because these fragments have been by far the most important for the reconstruction of Presocratic philosophy but also because they demonstrate most clearly Theophrastus' method of using Aristotle and the types of interpretation and misrepresentation that may come from it.

Before we turn to the fragments a few remarks should be made about their immediate source and their condition. Most of the attested fragments from the first book of the *Physical Opinions* are derived from Simplicius' comments on Aristotle, *Physics* 184 B 15 ff., in which Aristotle is schematizing all the possible views of the physical principles. Aristotle says that the principles must be either (1) one or (2) more than one. If (1) one, it must be either (a)

motionless, as Parmenides and Melissus assert, or (b) in motion, as the physicists hold, some fixing on air as the principle and others, on water. If (2) more than one, the principles must be either (a) finite or (b) infinite in number. If (a) finite, then they must be two, three, four, or some other number. If (b) infinite, then either (i), as Democritus holds, one in kind but differing in shape or (ii) different in kind and even contrary. Simplicius elaborates this scheme, identifies the philosophers under each heading, and gives brief statements from the *Physical Opinions* in support of his identifications. The following is a summary of his identifications. The principles, he says, must be either (1) one or (2) more than one (*Phys.* p. 22, 22-23). If (1) one, it must be either (a) motionless or (b) in motion (*ibid.*, p. 22, 23). If (1) one and (a) motionless, it must be either (i) infinite, as Melissus seems to say, (*ibid.*, p. 22, 23-24) or (ii) finite, as Parmenides says, (*ibid.*, p. 22, 24-25). (Xenophanes declared his one principle to be neither finite nor infinite and neither in motion nor motionless [*ibid.*, p. 22, 26-28].) If (1) one and (b) in motion, the principle must be either (i) finite, as is held by Thales and Hippo (*ibid.*, p. 23, 21-23) and by Heraclitus and Hippasus (*ibid.*, pp. 23, 34-24, 2) or (ii) infinite, as is held by Anaximander (*ibid.*, p. 24, 13-15) and by Anaximenes and Diogenes (*ibid.*, p. 24, 26-28, and p. 25, 1-4). If (2) more than one, the principles must be either (a) finite or (b) infinite (*ibid.*, p. 25, 14). If (2) more than one and (a) finite, they must be (i) two, as Parmenides (*ibid.*, p. 25, 15-16) and the Stoics (*ibid.*, p. 25, 16-18) hold, or (ii) three, as Aristotle (*ibid.*, p. 25, 18-19) and Plato (*ibid.*, p. 26, 5-7), or (iii) four, as Empedocles (*ibid.*, p. 25, 21-22), or (iv) ten, as the Pythagoreans (*ibid.*, p. 26, 27). If (2) more than one and (b) infinite in number, the principles must be either (i) simple and the same in kind, as Leucippus, Democritus, and Metrodorus hold (*ibid.*, pp. 26, 31-27, 1; 28, 4-10; 28, 15; 28, 27-28), or (ii) complex, different in kind, and opposite, as Anaxagoras and Archelaus hold (*ibid.*, p. 27, 2-5 and 23-36).

The arrangement of doctrines given by Simplicius is dictated by the passage on which he is commenting, and it is clearly not the arrangement of Theophrastus.⁸ Aristotle begins his survey in *Metaphysics* 983 B 20 ff. with Thales, and Theophrastus almost certainly did so too. Not only does Thales head the list in all the doxographers; Simplicius says that, according to Theophrastus, Thales was the first to reveal the investigation of nature to the Greeks (*Phys.*, p. 23, 29-30). Theophrastus probably concluded his history of causes, as Aristotle does, with Plato, since Simplicius says: ὁ μὲντοι Θεόφραστος

τοὺς ἄλλους προῖστορήσας "τούτοις, φησίν, ἐπιγενόμενος Πλάτων κτέ." (*ibid.*, p. 26, 7-8). What the original sequence of the philosophers between Thales and Plato was cannot be definitely settled. It seems likely that Theophrastus had followed the plan of Aristotle in *Metaphysics* A in arranging the doctrines in such a way as to demonstrate the revelation of the four causes. Such an arrangement is implied in the statement that Anaxagoras "supplied the missing cause" (*ibid.*, p. 27, 4), for this can only mean that philosophers before Anaxagoras had not given an adequate cause of motion. It is likely, too, that philosophers came after — although not always immediately after — those on whom they are said to be dependent or against whom they are said to have reacted. Thus Anaximander probably came after Thales (*ibid.*, p. 24, 13-14), Anaximenes after Anaximander (*ibid.*, p. 24, 26), Anaxagoras after Anaximenes (*ibid.*, p. 27, 2-3), Archelaus after Anaxagoras (*ibid.*, p. 27, 23-24), Xenophanes after Anaximander (*Dox.*, p. 482, 7-8), Parmenides after Xenophanes (Simplicius, *Phys.*, p. 22, 27-29), Empedocles after Parmenides (*ibid.*, p. 25, 19-20), Leucippus after Parmenides (*ibid.*, p. 28, 4-6), Democritus after Leucippus (*ibid.*, p. 28, 15-16), and Metrodorus after Democritus (*ibid.*, p. 28, 27-28). In some instances, however, Theophrastus seems to have broken the chronological order, as Aristotle does in the *Metaphysics*, so as to bring together philosophers who held similar doctrines but were widely separated in time. Thus, Hippo is linked to Thales, Diogenes to Anaximenes, and Heraclitus to Hippasus. Farther than this it is impossible to go with much confidence, and in this paper the fragments will be taken up in the order suggested by Usener and accepted by Diels in the *Doxographi Graeci*.

The content of Simplicius' comments has also been influenced by the *Physics* passage. The sentences with which he introduces each group of philosophers are clearly patterned on similar sentences in *Physics* 184 B 15 ff. and are certainly not from Theophrastus. It is evident, too, that the criteria by which Simplicius divides the doctrines are not always those employed by Theophrastus. Simplicius follows the *Physics* scheme, in which the physical principles are divided only as to their number, motion, and extent. It is clear from the fragments, however, that Theophrastus was concerned with the principles not only as physical constituents but also as causes of motion, as form, and as end. This difference — along with the fact that Simplicius' scheme is analytical, while Theophrastus' was in part historical — has undoubtedly led to some differences in emphasis and detail. Simplicius' division of the monists into Ionians and Eleatics would, for

example, probably be represented by Theophrastus as a historical phenomenon due to the Eleatics' recognition of the efficient cause and failure to find it. Simplicius' further division of the Ionians into those whose principle was finite (Thales, Hippo, Hippasus, and Heraclitus) and those whose principle was infinite (Anaximander, Anaximenes, and Diogenes) is probably not from Theophrastus at all but is due to Simplicius' unjustified extension of the *Physics* scheme. In two places Aristotle attributes an infinite principle to all the physical monists,⁹ although, again, in one passage of the *Physics* he states that no physicist made fire infinite.¹⁰ This last statement may be Simplicius' authority for accepting the common Stoic interpretation of Heraclitus' fire as finite.¹¹ No such explanation is possible in the case of Thales. None of the doxographers remarks as to whether his primitive water was conceived as being finite or infinite, and this silence is a good indication that nothing was found on the subject in Theophrastus. Aristotle's generalization that all the physicists made their principle infinite is undoubtedly, as Simplicius says in his comments there,¹² meant to include Thales; but it is improbable that Aristotle or anyone later knew what view, if any, Thales had expressed on this question. Theophrastus does say, according to Simplicius, that Anaximander was the first to use the term "Infinite" of his principle,¹³ and Simplicius may have misunderstood this as meaning that the principles of philosophers before Anaximander were finite. The inclusion of Hippo and Hippasus with Thales and Heraclitus as proponents of finite principles probably has no other basis than Theophrastus' grouping of similar doctrines.

Finally, there is the question of the general reliability of Simplicius as a source for the fragments of Theophrastus. In one section of his comments Simplicius confuses Theophrastus with the writer of the late treatise *De Melisso, Xenophane, Gorgia* and fails to see that the account of Alexander, to which he opposes this treatise, has been derived from Theophrastus. To account for this confusion Diels made the plausible suggestion that Simplicius did not have the original text of the *Physical Opinions* but collected excerpts from the lost commentary of Alexander on the *Physics*.¹⁴ If Diels was right, the fragments preserved by Simplicius are at best a quotation of a quotation, and there is no way of knowing how exactly Simplicius reproduced what he found in Alexander or how exactly Alexander had quoted from Theophrastus. Any discussion of the fragments that depends on the precise wording given by Simplicius is, therefore, open to the charge that the evidence will not stand such treatment. When all such con-

siderations are taken into account, the fact remains that Simplicius is the best available source for Theophrastus' discussion of the principles; and it will be assumed in the present study that, with the exceptions mentioned in this and the two preceding paragraphs, Simplicius has repeated substantially what Theophrastus wrote.

THALES AND HIPPO

A comparison of the account of Thales' principle quoted by Simplicius from Theophrastus with that given by Aristotle in the *Metaphysics* leaves little doubt of Theophrastus' dependence on Aristotle.¹⁵ The similarities between the two accounts are so striking that, if they were not found in the account of Aetius, which is also derived from Theophrastus, it might be suspected that Simplicius had himself copied directly from the *Metaphysics*. Both Theophrastus and Aristotle report that Thales declared water to be the principle of all things; that he arrived at this theory from the observation that the seeds of all things are moist, that nutriment is moist, and that the warm lives by the moist (Theophrastus adds that Thales observed that dying things dry up, and Aristotle, that the warm is generated from the moist); that he held that, since water is the principle, the earth rests on it. Theophrastus concludes his account with the remark that Thales was reported to have been the first to reveal the investigation of nature to the Greeks, that, although he had many predecessors, he was so superior to them as to eclipse them. This last is a synopsis of an allusion by Aristotle to a tradition that Homer and the early cosmologists had held views about nature similar to that of Thales.¹⁶

The simple statement that Thales declared water to be the principle of all things does not disclose precisely how Theophrastus is using the word "principle" nor what assumptions about Thales' doctrine are required by it. Aristotle settles these questions in the prefatory remarks before his account of Thales; and, since the assumptions that he makes there underlie all the accounts of matter that Theophrastus has taken from *Metaphysics* A, it will be well to discuss them at the outset. For Aristotle the ultimate material principle is a substrate which persists but undergoes changes of quality. This concept — or, rather, an approximation of it — was held, Aristotle believes, by all his predecessors, and he asserts that it is found even among the earliest thinkers.¹⁷ He says: "That of which all things consist, the first from which they are generated, the last into which they are destroyed — the substance remaining, but changing in its modifications — this, they

say, is the element and principle of things; and, therefore, they think that nothing is generated or destroyed, since they believe that this sort of entity is always preserved. . . ." ¹⁸ The effect of this is that all the early thinkers are represented as sharing Aristotle's analytical and abstract concern with matter. Lack of firsthand evidence from the writings of the early physicists prevents the complete resolution of doubts that may be held about the view of matter that Aristotle attributes to them — though the fact that he can seriously comment on the material theory of Homer in the same context with those of the physicists makes doubt not unreasonable. With regard to the concept of matter that he attributes to them, however, there can be no doubt. This concept rests on the combination of two ideas: the definition of identity and difference as formulated in consequence of Eleatic logic, and the distinction between subject and attribute as developed first by Socrates and Plato. ¹⁹ It is, therefore, an obvious historical impossibility that any Presocratic should have held this concept. If Thales did say that all things come from water, he cannot have meant that water is a principle in the sense that Aristotle and Theophrastus use the word. The entire doxographical tradition about his principle is, thus, spoiled at its source by an anachronism, an anachronism that becomes the more deceptive for being removed from its original context.

Two differences between the accounts of Theophrastus and Aristotle deserve notice. In the Theophrastus fragment the same doctrine and the same arguments for that doctrine are ascribed to Hippo as well as to Thales; but Aristotle, after completing his account of Thales, dismisses Hippo with the contemptuous remark that "no one would think fit to associate him with these (i.e., physicists such as Thales) because of the paltriness of his mind." ²⁰ Secondly, the statement of Thales' doctrine in Theophrastus is definite; but Aristotle says cautiously that "perhaps" Thales got his notion this way and that Thales "is said" to have declared himself thus about the first cause. ²¹

Aristotle's only other explicit reference to Hippo — again scornful — is to the effect that Hippo said the soul is made of water. ²² The reason that Aristotle ascribes to Hippo for believing the soul to be water is one of those that he ascribes to Thales — and Theophrastus ascribes to both Thales and Hippo — for the belief that water is the principle of all things, namely, that the seed of all things is moist. The further observation ascribed to both Thales and Hippo by Theophrastus, that there is a connection between an organism's health and its moisture, is ascribed to Hippo alone in Meno's *Iatrica*. Hippo is there said to have held that consciousness and health depend on an internal

moisture; when this moisture is in its normal condition the animal is healthy, but when it dries up the animal loses consciousness and dies.²³ Arguments of this sort are characteristic of the physiological speculations that accompanied the rise of scientific medicine in the fifth century B.C. At the time of Thales the prevailing interest appears to have been meteorological.²⁴ Probably he arrived at whatever notions he had of water from the observation of such phenomena as rain and evaporation, and the physiological arguments ascribed by Theophrastus to both Thales and Hippo are in fact those of Hippo alone. Theophrastus has apparently inferred from Aristotle's mention of Thales and Hippo in the same context that Aristotle considers their doctrines to be in all respects similar. The inference is plainly mistaken; the fact that Aristotle considers Thales seriously but excludes Hippo can only mean that he believes their doctrines to have differed in some important aspect.

The definiteness of Theophrastus' statement seems likewise due to failure to reproduce Aristotle's meaning exactly. Certainly, little can have been known of Thales by the fourth century B.C. Aristotle is the earliest writer to represent him as a philosopher, and the cautious tone of Aristotle's few other references to him leaves the impression that Aristotle knows little of him and recognizes the limit of his knowledge.²⁵ Little more may have been known about Hippo, but at least the important part played by water in his physiological theories was known, as, apparently, were the arguments on which he based his theories. Aristotle seems to believe that Hippo revived the earlier Milesian doctrine. He therefore suggests that Thales' arguments for the primacy of water may have been the same as those of his supposed successor. Simplicius reports, probably from Theophrastus, that Thales was said to have left nothing in writing but a work on nautical astronomy;²⁶ and there is no evidence that Theophrastus had any information about Thales' views on causality other than what is given in the *Metaphysics*. In its original form Theophrastus' account may have been as guarded as Aristotle's is. But in the quotation of it as given by Simplicius and in the doxographers such caution is absent. What had been for Aristotle at best a conjecture on a very uncertain tradition has become in them a historical fact.

HERACLITUS AND HIPPASUS

In the *Metaphysics* Aristotle says of Hippasus and Heraclitus only that they made their principle fire.²⁷ To this Theophrastus adds that

they held that fire is the substrate from which things are formed by rarefaction and condensation and into which they are again dissolved; for according to Heraclitus, he says, "all things are an exchange for fire."²⁸ With the exception of the last few words, which Theophrastus apparently drew from Heraclitus' works, this addition is merely particularization of Aristotle's general dicta that for all the material monists change was the alteration of a persisting substrate²⁹ and that they generated other things from the substrate by means of rarefaction and condensation.³⁰

The presupposition on which this account of Heraclitus is based is the same as that already noted in connection with Thales, that the material principles of the Ionians were approximations of the Aristotelian prime matter and differed from one another only in the names by which they were called.³¹ Even without firsthand evidence from the texts of the Ionians this representation of their notions of matter may be discounted. In the case of Heraclitus it may be disproved by reference to extant fragments of his writings. These show that he did not conceive fire as inert matter. The central point of his doctrine is, on the contrary, the constant flux of all things, including fire. The essential characteristic of fire is not its persistence as a substrate but rather its very impermanence, in which Heraclitus found at the same time both an explanation of the endless change of the phenomenal world and a visible symbol of that change.³²

Theophrastus' misunderstanding of the nature of the Heraclitean fire as a single material principle causes him to attribute the rarefaction-condensation process to Heraclitus. It has long been recognized that this attribution is false. In making it Theophrastus not only reads into Heraclitus the Aristotelian theory of qualitative change; he also involves his account in a curious difficulty and forces on Heraclitus' words an interpretation they will not bear. For the Peripatetics rarefaction-condensation implied an undifferentiated substrate that is informed by the contrary qualities rare and dense, i.e., hot and cold. Since according to their view fire is the rarest of the four simple bodies, it cannot be subject to rarefaction. In order to attribute both rarefaction and condensation to Heraclitus, therefore, Theophrastus must disregard the primary nature of fire and treat fire as something intermediate between rare and dense, i.e., an approximation of his own prime matter. That he does so seems clear from the distinction he makes between rarefaction-condensation and dissolution into the substrate;³³ for, if fire is really fire and not something intermediate in density, dissolution is simply rarefaction. Heraclitus himself said that

all things are an exchange for fire, and fire for all things, as wares for gold, and gold for wares.³⁴ Theophrastus refers to this simile to prove that Heraclitus employed rarefaction-condensation. But, whatever the figure may have meant for Heraclitus, it is not suitable as a description of rarefaction-condensation; for in the exchange of wares for gold the value of the substance remains, but the substance does not.³⁵

Theophrastus' account of Heraclitus' theory of change provides an interesting example of the way he may derive his interpretations from Aristotle and yet give an incomplete and erroneous presentation even of Aristotle's views by selecting certain statements and disregarding others. In *Metaphysics* A, which has been Theophrastus' chief source, Aristotle is concerned with Heraclitus' fire only as it squares with his own concept of material causality. And, when he is seeking antecedents for his theory of contrariety, he would certainly hold that for Heraclitus as a monist all change must be due to rarefaction and condensation. When, however, he is concerned with proving the impossibility of any of the four simple bodies as a single principle, he ascribes rarefaction-condensation to those who made their principle water or air or a body midway between air and water in density;³⁶ but he says Heraclitus held that things are formed from a composition of fire as from the melting down of metal scrapings.³⁷ How the process of smelting is to be applied to the generation of things from fire is not clear. The figure is at any rate not appropriate to signify rarefaction-condensation, and Aristotle's use of it is certain evidence that he cannot express Heraclitus' doctrine in his usual terms.³⁸ Similarly, Aristotle asserts that most of his predecessors were agreed that interaction could occur only between unlike or opposite things.³⁹ Under the influence of this view, in the *De Sensibus* Theophrastus attributes to Heraclitus the theory that perception is due to the interaction of opposites and involves alteration.⁴⁰ When, however, Aristotle comes to an individual consideration of Heraclitus' doctrine of the soul, he implies that Heraclitus believed interaction to be between similars, for he says that according to Heraclitus that which is in motion is known by that which is in motion.⁴¹

The reference in *Metaphysics* A is the only one that Aristotle makes to Hippasus, and, since Hippasus is said to have left no writings, probably nothing more was known of him in the Alexandrian age.⁴² Because Aristotle classes him with the material monists, Theophrastus has concluded that he employed rarefaction-condensation. Aristotle would subscribe to this conclusion as the necessary consequence of

Hippasus' use of a single material principle, but it is doubtful that he would claim that this was in fact the stated view of Hippasus. He introduces Hippasus in *Metaphysics* A only as an example of an earlier philosopher who had, like Heraclitus, made his principle fire. It may not be inferred from this that he thinks that the doctrines of the two had any further resemblances. Later accounts that link them in the belief that fire is god,⁴³ that the soul is fire-like,⁴⁴ and that the universe is in eternal motion, and subject to periodic change,⁴⁵ are apparently only further interpretations of Theophrastus' interpretation.

ANAXIMANDER

According to Simplicius' quotation from Theophrastus, Anaximander held that the Infinite is the principle of things, and he said that this is not water or any of the so-called elements but some other infinite body out of which are generated all the heavens and the worlds in them; things pass away into those things from which they are generated by necessity; for they make reparation and satisfaction to one another for their injustice in accordance with the order of time, as Anaximander said in somewhat poetic words.⁴⁶ In the historical synopsis of the *Metaphysics* Aristotle does not mention Anaximander by name. Elsewhere he gives two distinct and apparently contradictory accounts of Anaximander's principle: that it is a single body apart from the elements; and that it is a mixture like the mixture of Empedocles.⁴⁷

There is general agreement that the latter part of Theophrastus' account contains a fragment from the work of Anaximander, although there has been much debate as to how far the fragment extends, how much it has been altered in transmission, and what it means. It will be necessary to deal briefly with these questions before discussing the possible connection between Theophrastus' account and those of Aristotle. It may be taken as certain that the reference to Anaximander's "somewhat poetic words" indicates direct quotation and applies at least to the metaphorical statement that things make reparation and satisfaction to one another for their injustice. The preceding clause, which states that things pass away into those things from which they are generated, has been accepted as substantially, if not verbally, an accurate representation of Anaximander's thought. If this is so, the explanatory "for" that links this clause to the metaphor permits only one interpretation, namely, that the metaphor is a poetic expression for the process of generation and destruction. Accordingly, the un-

specified subject of the metaphor must be the things that are generated and destroyed; the payment of reparation and satisfaction is equated with destruction; and the injustice that is so expiated must be due in some way to generation. Most attempts to reconstruct Anaximander's doctrine depend on some such interpretation of the text as this. But the two clauses cannot be connected in the way supposed. They express two quite distinct relationships which do not explain each other. The dissolution of things into those things from which they are generated involves the relationship of particular things to their source. The metaphorical clause, on the other hand, suggests the opposition of equals in a court of law and the compensation of one equal by the other for a wrong committed. There can be no such equality between particular things and the Infinite, nor can there be any question of the generation and existence of a thing being an injustice against the Infinite.⁴⁸ And to say that the dissolution of a particular thing into the Infinite is the same as the payment of reparation to the thing's injured opponent is to ascribe to Anaximander a concept of law that no Greek of his time would have understood. As has frequently been noted, the metaphor refers to the *jus talionis*. According to this the expiation of a wrong is settled between the interested parties and their immediate kin; reparation is made directly to the sufferer and not to some third superior authority, which in this case must be the Infinite.

The key to the problem is the clause about generation and destruction. The observation that on death things are resolved once more into that from which they were generated is a commonplace in Greek literature, and it is definitely attested in philosophical writings as early as Xenophanes.⁴⁹ But the language in which it is here cast belongs to a later period, and both the language and form recall similar statements in Aristotle.⁵⁰ One of these occurs in a passage of the *Metaphysics* which has influenced Theophrastus' treatment of all the Ionians. Aristotle says that most of the early philosophers thought that the principles in the form of matter were the only principles of all things, for, he says, they thought that the element or principle of things is "that of which all things consist, that from which they are first generated and into which they are finally destroyed."⁵¹ In the extant fragments of the *Physical Opinions* this notion of circular change is ascribed to Hippasus and Heraclitus as well as to Anaximander; and in derived doxographical accounts it is ascribed to all the Ionians.⁵² With Aristotle's statement may be compared, for example, the following from Aetius: "Anaximander says that the Infinite is the principle, for all things are generated from this and all things are

destroyed into this.”⁵³ The conclusion is unavoidable. What Theophrastus has done is apply to the Ionians individually what Aristotle has asserted of them as a group.⁵⁴ The probability that Theophrastus is quoting or paraphrasing from Anaximander is, therefore, no greater or less than that Aristotle and he are quoting or paraphrasing from any other member of the group. Aristotle does not claim that any of the Ionians formulated the principle of circular change in so many words; and, far from regarding this principle as an unique feature of Anaximander’s doctrine, he does not mention Anaximander in *Metaphysics* A at all.⁵⁵ He is intimating what he thinks must have been the Ionians’ reasoning about the nature of the material cause.⁵⁶ Theophrastus’ intention is evidently the same. The generation-destruction clause is not to be connected with the metaphor; and it does not refer to any special view of Anaximander but to the view that he supposes Anaximander held in common with the other Ionians.

This solution does not remove all the difficulties from the passage, but it does clear the way for understanding the function of the metaphor. Reference to the cycle of generation and destruction is made parenthetically to identify the Infinite as the material substratum. The things generated from the Infinite and destroyed into it are things in general, including the heavens and the worlds in them. The things of the metaphor are things of a special sort, things that are opposed and that wrong each other. The only such things of which Theophrastus speaks are the “so-called elements.” The gist of the passage, then, is this: Anaximander declared the Infinite to be the principle of all things (i.e., that out of which all things are generated and into which they are destroyed); and he said that the Infinite is some body which is not water or any of the other so-called elements, for, as he said, “they make reparation and satisfaction to each other for their injustice.” Thus, Theophrastus is quoting what appears to be Anaximander’s justification of his own doctrine against Thales and any one else who made one of the opposed elements the primordial matter. The thread of the argument has been obscured, probably by Simplicius.⁵⁷ But it is clear that Simplicius, too, understood the subject of the metaphor to be the elements and took the metaphor as Anaximander’s argument for the existence of a separate Infinite. Immediately after the metaphor he adds the comment that Anaximander observed the change of the elements into one another and thought, therefore, that the substratum must be other than the elements.⁵⁸

Theophrastus does not say by what intermediate step he believes Anaximander to have proceeded from the opposition of the elements

to the conclusion that the Infinite must be other than the elements. The missing step may be readily supplied: if one of the elements were the Infinite, the other elements could no longer restrain its injustice by compelling it to pay retribution, and they would, consequently, be destroyed by it. The argument is given in full by Aristotle in the first of his interpretations mentioned above. He says that some philosophers set up the Infinite as the source of the elements and other than them because the elements are contrary to one another and, if one of them were infinite, it would destroy the others.⁵⁹ He does not mention Anaximander by name, but it is almost certain that he is thinking primarily of him. Theophrastus has accepted Aristotle's reconstruction of Anaximander's reasoning and has submitted Anaximander's metaphor as evidence — probably the very evidence used by Aristotle in the first place.

Aristotle and Theophrastus assume that by the Infinite Anaximander sought to correct doctrines whose single infinite material principle was one of the elements; he had, like the other Ionians, accepted as real the diversity of the physical world, but he had seen that the consequence of the destruction of opposites by one another must be that in a universe such as Thales' there could never be anything but an infinite mass of one element. Now, the name given by Anaximander to his principle does suggest that he may have reasoned that the infinite diversity of things could be accounted for only by some principle that was no single thing but was the source of all things. But Theophrastus and Aristotle throw no light on what his reasoning was. Their interpretation clearly presupposes that he had subscribed to the specifically Aristotelian notion of the equilibrium of the contraries and the genesis of the four simple bodies through the interaction of the contraries on undifferentiated matter.⁶⁰ This interpretation is proved unhistorical if only by the fact — acknowledged by Aristotle himself — that Empedocles introduced the concept of four elements. The further errors in supposing the Infinite to be undifferentiated matter in the Aristotelian sense will be demonstrated presently.

The implication of such a material principle as Aristotle and Theophrastus attribute to Anaximander would for them be that all change must be qualitative.⁶¹ But Simplicius, probably on Theophrastus' authority, says that Anaximander held generation to be not the qualitative change of the material principle but the separation of the contraries due to eternal motion.⁶² Simplicius notes that this is the reason why Aristotle groups Anaximander with Anaxagoras. In a later passage he says that according to Theophrastus, too, the doctrines of

Anaximander and Anaxagoras are similar, for Anaximander said that in the process of separation from the Infinite like is borne to like and that particular things such as gold and earth are not generated but have existed previously in the Infinite.⁶³ Theophrastus believes that the material principle of Anaxagoras may be considered either as a mixture of infinite particles or as a single body that is indeterminate in kind and size. In either case, he concludes, the material principles of Anaxagoras and Anaximander would appear to be similar.

The meaning of this last passage is obvious: Theophrastus thinks it possible to consider the material principle of Anaximander both as a single indeterminate body and as a mixture. Since these two concepts appear to be incompatible, modern scholars who believe Anaximander to have been a monist have sought to rescue Theophrastus from this difficulty by arguing that he does not mean to attribute a mixture to Anaximander.⁶⁴ Their argument would make Simplicius guilty of misunderstanding Theophrastus. But there is no reason to doubt that Simplicius is reporting Theophrastus accurately; for Anaximander is treated as a pluralist by St. Augustine, who wrote a century before Simplicius and derived material from Theophrastus through a different line of transmission.⁶⁵ The seeming contradiction of Theophrastus must stand.

How Theophrastus can treat the Infinite both as a single body and as a mixture becomes apparent from the passage of the *Physics* in which Aristotle gives his second interpretation of Anaximander.⁶⁶ He distinguishes Anaximander, Anaxagoras, and Empedocles from the monists on the grounds that, whereas the monists derived plurality by condensation and rarefaction, these three separated the inherent contraries from their material principle. This principle he designates both as a mixture and as the One; thus at the same time he sets Anaximander, Anaxagoras, and Empedocles off from the monists and he reduces them to essential identity with the monists by designating their principle as the One. He is enabled to do so without contradiction because he assumes that the mixture of these three is in fact not a mixture but a homogeneous body in which the four simple bodies are qualitatively suspended through the alteration of each in the direction of its opposite. Hence, although his use of the word "separate" implies the pre-existence in the mixture of contraries as distinct things, he is thinking of the contraries not as material ingredients but as the limits of the alteration of the prime matter; by the inherence of these contraries in the One he means the potential inherence of the contraries in his chemical mixture; and by separation he means the actu-

alization of these potential contraries.⁶⁷ This passage is almost certainly Theophrastus' second source, and his interpretation becomes intelligible in the light of it. By understanding Anaximander's mixture in the special sense in which Aristotle does here Theophrastus may with indifference speak of it now as a unity and now as a plurality, since regardless of the term he uses the result is the same; the Infinite is a unified substratum for alteration, and separation from the Infinite is simply that alteration.

That Anaximander or any of the other Presocratics should have conceived the mixture in this way is highly improbable. Such a mixture presupposes the Aristotelian concept of qualitative change, a concept which, as has been seen, cannot have been held by any Presocratic. The mixture of the Presocratics in general was simply an aggregate of infinitesimal particles of things, and generation from the mixture was the separation of these particles. If Anaximander did speak of inherence in the mixture, then, he meant the inherence of actually existent things and not the inherence of anything like the Aristotelian contraries. If he referred to the Infinite in language that would suggest to the Peripatetics an indeterminate substance, he meant simply that in the Infinite no one thing so predominates as to give the Infinite any one definite character.⁶⁸ Very probably he did think of the Infinite as containing particles of contrary things; but, apart from the accounts of Aristotle and Theophrastus and the doxography dependent on them, there is no evidence for the current notion that these contrary things were prototypes of the four simple bodies.

If Aristotle has misinterpreted both the nature of the Infinite and the nature and functions of its constituent parts, and if Theophrastus has merely repeated his misinterpretation, what positive historical value have their accounts? Their attempt to make a monist of Anaximander is on a par with their similar treatment of Anaxagoras and Empedocles and is no more or less credible. But what is significant is that they feel constrained to group Anaximander with the pluralists at all. Since the result of their interpretation is that he turns out to be a monist, there appears to be no reason that they should not have considered him as a monist from the outset if they had any good evidence for doing so.⁶⁹ The grouping of Anaximander with the pluralists, then, may be of some importance as a recognition of the fact that, however his doctrine may have differed from that of Anaxagoras or Empedocles, it was more closely related to theirs than to the monists'. Furthermore, it should be noted that, although the interpretation of Aristotle and Theophrastus are responsible for the em-

phasis placed on contrariety in later accounts of Anaximander, their interpretations hardly justify that emphasis. In his second interpretation Aristotle's aim is to prove that Anaximander recognized the function of contrariety in generation. He therefore fixes attention on the contraries because they are the only products of the separation from the Infinite that are important for his argument. He may intend to give the impression that all the products of separation are contrary, but he does not specifically say that Anaximander himself stated so. He speaks of the separation of contraries from the mixture of Anaxagoras in the same context, although a few lines later he makes it clear that he is aware that the homoeomeries include such things as flesh and bone.⁷⁰ Theophrastus evidently believes that Anaximander's theory of change was like the homoeomery theory of Anaxagoras, and he gives as examples of things separated from the Infinite not only the contrary earth but also gold.⁷¹ Having seen in his account of Thales and Hippo how he may overinterpret Aristotle's association of two philosophers, we may doubt that he has any better authority for attributing the homoeomery theory to Anaximander than Aristotle's statement that both Anaximander and Anaxagoras employed the process of separation from the mixture. But at any rate Theophrastus is probably near the truth of the matter. Despite their attempt to reduce Anaximander to the terms of their own doctrines, therefore, both Aristotle and Theophrastus give indications of knowing that Anaximander was a pluralist. And, however questionable may be the basis of Theophrastus' attribution of the homoeomery theory to Anaximander, the fact that he makes this attribution means that testimony derived from him cannot be used to support the modern view that all the ingredients of the Infinite are contrary.

ANAXIMENES AND DIOGENES

Theophrastus says that Anaximenes agreed with Anaximander in declaring the substrate to be one and infinite but differed from him in making it a qualitatively defined substance, air.⁷² This principle, Anaximenes thought, varies in density and rareness; as it is rarefied it becomes fire; as it is condensed it becomes wind, cloud, water, earth, and stone according to the degree of condensation; and from these things the others are derived. Like Anaximander, he maintained that motion is eternal and that change is caused by it. The core of this passage is Aristotle's statement in the *Metaphysics* that Anaximenes and Diogenes believed air to be prior to water and to be the most

primary of the simple bodies.⁷³ The rest is for the most part drawn from other statements made by Aristotle regarding the monists in general without special reference to Anaximenes. He says that all the physicists consider the infinite an attribute of one of the elements; that all the physicists who make the substrate one of the elements generate other things by rarefaction and condensation; that all who employ a single principle such as air or water believe that it is in motion; and that all who believe that there is an infinite number of worlds, some being generated and some being destroyed, assume that motion is eternal.⁷⁴

When Theophrastus speaks of air as a unitary substrate and uses Aristotle's technical word for this, he betrays once more the influence of Aristotle's tendency to interpret the Ionian principles as substrates of alteration; and it is safe to assume that his use of the word implies all the significance attached to it by Aristotle.⁷⁵ One consequence of Ionian monism is, according to Aristotle, that generation and destruction must be the qualitative change of the substrate; and, in order to accommodate the Ionian rarefaction and condensation theory to his own theory of qualitative change, he equates the rare and dense with the hot and cold, which are his contrary forces.⁷⁶ The result of this for Anaximenes is that air becomes, in fact if not in name, a homogeneous and qualitatively neutral body that is subject to alteration by the hot and cold. As in the case of Anaximander, however, Theophrastus makes statements about Anaximenes' principle which would prove that air is not a substrate in the Aristotelian sense. The very name of Anaximenes' principle shows that he did not conceive it as qualitatively neutral, and Theophrastus makes a point of distinguishing Anaximenes from Anaximander by the fact that air is qualitatively determined while the Infinite is not. And that air is not homogeneous and that the differentiation of air is not alteration is shown by the parallel he finds between the mechanism of change employed by Anaximenes and Anaximander. In saying that Anaximenes, like Anaximander, explained change by eternal motion he must mean that change results not from alteration but from some mechanical process which causes the emergence of things that are differentiated in their degree of extension and compression.⁷⁷

It is likely that Anaximenes did consider fire, wind, cloud, water, earth, and stone to be products of the rarefaction and condensation of air. But it is doubtful that, as Theophrastus says, he derived other things from these. Theophrastus apparently supposes that he used two distinct processes of generation: rarefaction and condensation,

by which he accounted for certain primary differentiations, and combination, by which he formed compound things from these primary differentiations. But, if Anaximenes was satisfied to explain such seemingly diverse things as stone and cloud by the single process of rarefaction and condensation, it is hard to imagine that he would have felt the need for any kind of secondary process. And, since the sole difference between the supposed primary bodies is one of extension, the difference between the compounds of these bodies would presumably be the same, so that in its effect combination would be identical with rarefaction and condensation. The double process is needed only if the primary bodies are elements. Undoubtedly Theophrastus thinks that they are.⁷⁸ Aristotle's theory is that the four simple bodies are produced through the action of the contraries on primary matter and that compound bodies are combinations of the simple bodies. Theophrastus has found both substratum and contrariety in Aristotle's treatment of Anaximenes; and these two originative sources give rise to bodies which, although more numerous, are approximations of the Aristotelian simple bodies. The error in thinking that the differentiations of air are simple bodies of this sort needs no demonstration. It is sufficient to note that the Aristotelian theory involves qualitative change. Indeed, to postulate simple bodies of any sort is possible only if Anaximenes fails to apply his rarefaction-condensation principle rigorously. Either he did so fail, or — what is more likely — the things cited by Theophrastus are not primary differentiations at all but are merely a few striking examples drawn by Anaximenes from the whole scale of density, probably with the purpose of illustrating the operation of his theory.

Theophrastus, like Aristotle, groups Diogenes of Apollonia with Anaximenes as holding the theory that air is the principle of things.⁷⁹ He says, further, that Diogenes, too, maintained that air is infinite and eternal and that the form of other things comes to be from it when it is rarefied and condensed, i.e., when it changes in its modifications.

In extant fragments Diogenes does describe air as an eternal and undying body, and he does say that there are modifications of air due to differences in heat and cold, dryness and dampness, greater and less mobility, etc. which arise and pass away.⁸⁰ Theophrastus probably had the writings of Diogenes available, but his treatment of Diogenes here is essentially the same as his treatment of Anaximenes and is probably from the same source.⁸¹ Diogenes' writings are at any rate no protection against the influence of Aristotle. With Aristotle,

Theophrastus infers that, since the principle is referred to in the singular, unity in the Eleatic sense is meant. The eternity of the principle as opposed to the transitoriness of its modifications points to its being a persistent substrate of change. And the identification of rarefaction and condensation with qualitative change is facilitated by the fact that Diogenes seems himself to have equated the rare and dense with the hot and cold.⁸² But the air of Diogenes is no more an Aristotelian substrate than is that of Anaximenes. When he refers to air as "manifold," he is referring not to the qualification of air by the contraries but to the numberless modifications that he says "are in it." These modifications are quantitative. He says that all things have a share of air but the share of each thing is not the same as that of any other thing. To be sure, he distinguishes the different forms of air by their heat and cold, etc.; but there can be no question that the basic difference between things is in their density.⁸³

The grouping of philosophers that Theophrastus has taken from the *Metaphysics* has here resulted in a serious misrepresentation of doctrine. Aristotle is convinced that the material monists did not — and could not — answer the problem of efficient causality, and he makes no distinction between the early and late monists in this regard.⁸⁴ Thus, Diogenes is represented as differing from Anaximenes only in being after him in time. Aristotle asserts, further, that it is unlikely that one of the elements is the cause of the goodness in things or that the materialists should think that it is.⁸⁵ Now, the doctrine that Aristotle here rejects as inconceivable is precisely that maintained by Diogenes. He introduces Intelligence as the cause of motion and of the best possible order in the world, and this Intelligence is a form of air.⁸⁶ It must have been as obvious to Diogenes as it was to Aristotle that material monism was no longer tenable if it failed to cope with efficient causality. Diogenes attempted to preserve the earlier doctrine by incorporating in it later notions about the cause of both motion and order. Aristotle's suppression of this part of Diogenes' doctrine, in complete disregard for Diogenes' clear statements, is a criticism based on his own presuppositions about the final-efficient cause. The offhand manner in which he rules out even the possibility that the cause of goodness should be material is intended to dispose of doctrines like that of Diogenes as being not worth further comment. His silence about Intelligence falsifies Diogenes' doctrine, but his motive is clear. Theophrastus acknowledges Diogenes' connection with the late physicists by saying that Diogenes wrote for the most part in an eclectic manner and agreed in some points with Anaxagoras

and in others with Leucippus.⁸⁷ By the reference to Anaxagoras is probably meant, among other things, Diogenes' adoption of Intelligence as the final-efficient cause, but Theophrastus does not, like Aristotle, give any reason for excluding this cause from his account.

EMPEDOCLES

According to Theophrastus, the material principles of Empedocles are four — fire, air, water, and earth —, which are eternal but change in number owing to aggregation and segregation.⁸⁸ The principles in the strict sense, those by which the four elements are moved, are Love and Strife; for, as Empedocles held, the elements must be continually in alternate motion, being at one time aggregated by the force of Love and at another time segregated by the force of Strife. Theophrastus quotes from Empedocles: "at one time all uniting in one through Love, at another being borne apart by the repulsion of Strife."⁸⁹ This quotation, we must suppose, is the authority for Theophrastus' report.

If Theophrastus has consulted the works of Empedocles, he has done so, apparently, only to find support for the interpretation of Aristotle; for his account is in all essentials the same as the descriptions of Empedocles' material and efficient principles in *Metaphysics* A.⁹⁰ Probably the verses that Theophrastus quotes were the basis for part of Aristotle's account. The only point at which he differs from Aristotle is in his assertion that the alternate motion caused by Love and Strife was continuous. The source for this is apparently the verse of Empedocles immediately preceding the verses quoted.⁹¹ In *Metaphysics* A Aristotle does not specify whether Empedocles held that motion is continuous or not; but in that context at least he would probably agree with Theophrastus, since the only distinction he makes there regarding motion is that the Eleatics denied it and the other Presocratics accepted its existence with or without stating a cause for it.⁹²

Since Aristotle and Theophrastus assume that Empedocles' principles can be adequately expressed in terms of the Peripatetic material and efficient causes, they treat the four elements as permanent, inert masses of substance that are in themselves incapable of motion and they treat Love and Strife as two immaterial, universal motors that act upon the elements. The degree to which Theophrastus has carried this identification of Empedocles with the Peripatetics is shown clearly by his designation of Love and Strife as the "principles in the strict sense";⁹³ for this reflects the Peripatetic conviction that the form-

efficient cause is more a principle than matter is. Enough of Empedocles' work remains to allow a test of this interpretation. It is obvious from the fragment quoted by Theophrastus that the principles of Empedocles had certain resemblances to the Aristotelian material and efficient causes; but it is equally obvious from other fragments that there is no exact correspondence and that Empedocles did not define the nature and operation of his principles as precisely as this interpretation would suggest. And, while he says that Love aggregates and Strife segregates the elements, he also attributes to the elements certain motions of their own.⁹⁴ From this it follows that the four roots are not inert matter, and Love and Strife are not the causes of all motion. In fact, the fragments indicate that Empedocles thought of Love and Strife chiefly, if not exclusively, as effecting the formation and dissolution of organic compounds.⁹⁵

In the latter part of his account Theophrastus attempts to show that Empedocles was not consistent in his use of Love and Strife. Not only did Empedocles assign the efficient power to Strife and Love when he said, "at one time uniting in one through Love, at another being borne apart by the repulsion of Strife."⁹⁶ Sometimes he reduced Love and Strife to the level of the elements and thus posited six elements; for he said, "And at one time it parted asunder so as to be many instead of one; — fire and water and earth and the mighty height of air and dread Strife, too, apart from these, everywhere of equal weight, and Love, in their midst, equal in length and breadth."⁹⁷ This passage of Theophrastus has been cited as evidence that Theophrastus regards Love and Strife as no less material than the four elements and Empedocles himself so regarded them.⁹⁸ That these two forces are never matter in the sense that the four elements are, is, however, shown by their special functions and by the facts that they are seen only with the mind⁹⁹ and are never, in the fragments, referred to as constituents of any thing.¹⁰⁰ Furthermore Theophrastus does not say simply that Love and Strife are elements; his objection is that *sometimes* they are like elements and *sometimes* they are not, i.e., that Empedocles treated them both as material and as immaterial. What Theophrastus means by calling them elements becomes clearer from related Aristotelian passages that probably influenced his criticism.

In *De Generatione* Aristotle likewise attributes six elements to Empedocles,¹⁰¹ and once in the *Metaphysics* he distinguishes Empedocles' Love from Anaxagoras' Nous by calling the one an element and the other a principle.¹⁰² In the former passage he differentiates between the two efficient elements, Love and Strife, and the four material ele-

ments. The latter passage shows that his reason for calling Love and Strife elements rather than principles is not that he considers them to be of the same nature as the four elements but that they seem less immaterial than such efficient principles as Anaxagoras' Nous. In a further passage he objects that Empedocles made Love both an efficient and a material principle;¹⁰³ but this no more than the passages already mentioned is proof that he considers Love to be simply a material element. His argument depends solely on his conviction that the Sphere is a homogeneous compound and that Love, being part of it, must be material. The quotation given by Theophrastus indicates that he is following the same line of reasoning. The basis of his argument is not so much the physical attributes of Love and Strife as the fact that these forces are listed along with the four elements as if all six were products of separation from the One. Theophrastus is misinterpreting the verses he quotes; for, when the elements are completely brought together by Love, Strife has withdrawn and is, therefore, not part of the Sphere.¹⁰⁴ Furthermore, although his criticism is right insofar as Love and Strife are not consistently treated as immaterial forces, they are certainly more nearly immaterial than material; for Empedocles held that all space is filled by the elements,¹⁰⁵ and Love and Strife operate on them not from without but from within as they do in living creatures.¹⁰⁶

The part of Theophrastus' report that is based on the *Metaphysics* reproduces Aristotle's interpretation accurately. But attention should be drawn to Aristotle's other comments made there and elsewhere. To be sure, in the *Metaphysics* he refers, as Theophrastus does, to the four roots as elements, but he also calls them "the so-called elements in the form of matter," and by this vague expression he signifies that the four roots do not accord exactly with his own concept of matter.¹⁰⁷ He treats Love and Strife as efficient causes, but he places limits on the equation of them with his own efficient cause; for, while he grants that Empedocles had made greater use of these causes than Anaxagoras did, he objects that Empedocles still did not use them adequately or consistently.¹⁰⁸ The interpretation that Theophrastus adopts from *Metaphysics* A is only one of several offered by Aristotle. Although in the *Metaphysics* Aristotle treats Empedocles as a material pluralist for whom apparent generation and destruction are merely the aggregation and segregation of four unchanging and distinct substances, in another context he complains that Empedocles speaks both as a pluralist and as a monist.¹⁰⁹ As a pluralist, he holds, Empedocles must distinguish between generation and alteration.¹¹⁰ When he

makes Empedocles a monist, on the other hand, he treats the Sphere as a homogeneous substrate in which the contraries inhere potentially.¹¹¹ On this view the Sphere, not the elements, is ultimate; and this Aristotle considers to have been Empedocles' belief, contrary to what Empedocles himself had said.¹¹² He holds, too, that, although Empedocles did not express himself clearly, he meant that Love and Strife were also the causes of good and evil, i.e., final causes.¹¹³ Again, he treats Love and Strife not as causes at all but as the states of the world at the moments of complete aggregation and segregation.¹¹⁴ In *Metaphysics* A he probably considers the operation of Love and Strife to be continuous; but in one passage of the *De Caelo* he makes Empedocles' cosmic cycle start with a precosmical unified body in a state of rest.¹¹⁵ This interpretation is clearly incorrect since it ignores the fact that during both the increase of Love and the increase of Strife both Love and Strife are active. What matters is not that some of these interpretations are in greater or less agreement with the fragments but that each of them has as much claim to being Aristotle's judgment as his interpretation in the *Metaphysics* has. A complete text of the *Physical Opinions* might reveal the same diversity in Theophrastus' interpretations. For, although in his treatment of the principles he understands the activity of Love and Strife to be continuous, in the *De Sensibus* he assumes, as Aristotle does in the *De Caelo*, that only one force is active at one time and that during the period of Love only aggregation takes place.¹¹⁶

ANAXAGORAS AND ARCHELAUS

Theophrastus says that Anaxagoras was the first to change the opinions about the principles by supplying "the missing cause" and that his material principles were infinite.¹¹⁷ He held that all the homoeomeries, such as water, fire, and gold, are ungenerated and indestructible and that apparent generation and destruction is due only to their aggregation and segregation. All things, he believed, are in all things, and a particular thing, such as gold, derives its character and name from the predominance of one thing in its composition; for he had declared that "in everything there is a portion of everything" and "each thing is and was most manifestly those things of which it has most in it."¹¹⁸ Theophrastus makes the comment that this theory resembles that of Anaximander, since Anaximander, too, held that in the separation from the Infinite like particles are borne to like and that particles are not generated but are already present in the Infinite.

The difference between the two theories is that Anaxagoras posited Nous as the cause of motion and generation. Thus viewed, Theophrastus says, Anaxagoras' material principles would appear to be infinite, and the cause of motion and generation would be one. He adds, however, that if the mixture of Anaxagoras were understood as being one thing, indefinite in kind and size, it would appear that Anaxagoras' principles were two, the Infinite and Nous. Theophrastus remarks that this latter explanation is what Anaxagoras "would seem to mean."

The quotations from Anaxagoras establish that Theophrastus has used at least part of the work on which he is reporting. But the interpretation that he gives is throughout influenced by Aristotle. The statement that Anaxagoras made Nous the cause of motion and generation may, for example, have been derived from the text of Anaxagoras.¹¹⁹ But the statement that Anaxagoras first changed the opinions about causality by supplying "the missing cause" is an interpretative comment and criticism derived from the *Metaphysics* and is understandable only on the thesis developed there. If this statement is taken by itself, granted the identification of Nous as the missing cause, there is still no indication of what the whole is from which Nous has been missing. And, even if it be supposed that the whole is the four Aristotelian causes, there is still the difficulty that Theophrastus attributes efficient causality to Parmenides, whom he presumably knew to be earlier than Anaxagoras.¹²⁰ In the *Metaphysics* Aristotle states how Anaxagoras changed the opinions about causes and in what sense the cause that he proposed could be said to fulfill a lack. Parmenides had, according to Aristotle, used fire as an efficient cause; but, since such causes as this and the other elements are inadequate to generate the world, men were compelled by the truth to seek "the next cause," for neither a material element nor chance could be the cause of the goodness and beauty in things. Anaxagoras, then, seemed like a sober man by comparison with the random talk of his predecessors when he declared that Nous is present throughout nature as the cause of order and arrangement, i.e., as the cause both of the goodness in things and of movement.¹²¹ This is undoubtedly what Theophrastus means, too; Anaxagoras was the first to glimpse the final-efficient cause as something that must by its very nature be other than the elements, by which Parmenides and other earlier thinkers like him had explained motion. It should be observed, however, that, although Aristotle praises Anaxagoras as the discoverer of the final-efficient cause, he reports a tradition that Hermotimus had ex-

pressed the same views earlier than Anaxagoras.¹²² And he goes on to say that one might suspect that the first to seek after such a cause was Hesiod or Parmenides or whoever first made Love a principle and that Empedocles treated both good and evil as principles.¹²³ He promises that he will decide later how all these thinkers should be arranged with regard to the priority of their discovery.¹²⁴ But he does not fulfill this promise, and Theophrastus has been content to accept his enthusiastic acclaim of Anaxagoras as proof that Anaxagoras was the first.

The statement that Anaxagoras' material principles are infinite, ungenerated, and indestructible and that apparent generation and destruction are due only to their aggregation and segregation may likewise be supported by the fragments of Anaxagoras.¹²⁵ But the wording follows closely the wording of the *Metaphysics*.¹²⁶ Clear evidence that Theophrastus is borrowing from Aristotle is his reference to the principles as "homoeomeries." This word does not occur in the fragments of Anaxagoras; it is Aristotle's translation into his own phraseology of Anaxagoras' "seeds," and it is a possible translation because Anaxagoras included in his seeds substances such as flesh and bone which Aristotle calls by the general term "homoeomery."¹²⁷ The importance of the word in the present context is that Theophrastus has followed *Metaphysics* A in giving fire and water as examples of the Anaxagorean homoeomeries. These examples are misleading both with regard to the place of the elements in Anaxagoras' philosophy and with regard to the opinion of Aristotle and Theophrastus on this question.¹²⁸ Thus far, in presenting earlier notions of matter, when Theophrastus has referred to the elements as principles he has meant the *maxima membra*; and, for lack of warning to the contrary, it is to be assumed that he means the same thing when he speaks of the doctrine of Anaxagoras. Now, Anaxagoras undoubtedly did think that there were seeds of the Empedoclean elements as well as of other things; and, since the Aristotelian term "homoeomery" is used of the elements as well as of substances like flesh and bone, fire and water may be cited as examples that hold true for both the Aristotelian homoeomeries and the Anaxagorean seeds.¹²⁹ But Aristotle himself knows that the seeds of the elements are not the *maxima membra*, and in the *De Caelo* and the *De Generatione* he distinguishes Empedocles from Anaxagoras by the observation that for the former the elements, i.e., the *maxima membra*, were ultimate and for the latter they were compounds of the homoeomeries.¹³⁰ And the fact that Theophrastus adds gold along with fire and water as an example of the homoeomeries

is tacit recognition that these are not elements in the Empedoclean sense.¹³¹ This being so, it may be asked why fire and water, rather than some unambiguous substances like flesh and bone, are given as examples. The reason, although obscured by the patchwork form of Theophrastus' accounts, is clear in Aristotle's outline of the development of the material cause in the *Metaphysics*. Aristotle believes that all earlier theories of matter resembled his own and were an imperfect expression of it. The material principle toward which the earlier theories evolve is prime matter, and of this the simplest visible forms are the four simple bodies, which the early philosophers thought to be ultimate. The evolution of the material cause is, thus, the emergence of first one, then another, then all four of the simple bodies. The earliest monists each posited one of these as his principle; Empedocles posited all four; and Anaxagoras made his principles infinite.¹³² The reference to fire and water as examples of Anaxagoras' principles is meant to show that he does not stand outside of the general evolutionary pattern; his material principles were of the same sort as those of his predecessors and differed only in being numerically infinite.

For his assertion that all things are in all things and that a particular thing such as gold derives its name and character from the predominance in it of one thing, Theophrastus has the evidence of the quotations that he makes from Anaxagoras.¹³³ It does not follow, however, that he has made an independent evaluation of the evidence. Essentially the same description of the theory appears in *Physics A* in a passage that follows immediately after one that will presently be shown to have influenced the latter part of Theophrastus' account. Aristotle describes the theory thus: everything is mixed in everything; things appear different from one another and receive different names according to the numerical predominance of one of the infinite particles in the mixture; nothing is purely and wholly white, black, sweet, flesh, or bone, but the nature of a thing is that of which it contains the most.¹³⁴ This is clearly a paraphrase of the statements of Anaxagoras quoted by Theophrastus or of others similar to them. In this case, again, Theophrastus has apparently adopted the interpretation of Aristotle and has filled in what he thinks is the primary evidence for it. One notable feature of the present descriptions of both Theophrastus and Aristotle is that the homoeomeries are no longer associated with the elements. The example used by Theophrastus is gold; and those of Aristotle are non-contrary things and contrary qualities such as might have been selected to prove the difference between the homoeomeries and the elements.

In the fuller exposition of Anaxagoras' theory to which Theophrastus proceeds in the latter part of his account, he returns to the view implicit in his reference to fire and water as homoeomeries, and he tries to show that Anaxagoras shared the presuppositions on which the theory of the four simple bodies is premised.¹³⁵ This is the significance of his remark that the material cause of Anaxagoras is the same as that of Anaximander and may be treated either as plural or single. He says that Anaxagoras "would seem to mean" that it is single, and from this it may be inferred that he knows that Anaxagoras did not actually say anything of the sort. His authority is now not the text of Anaxagoras but the interpretation set forth in the passage of *Physics* A preceding that referred to above.¹³⁶ This interpretation has been discussed in the section on Anaximander, but it should be reviewed here. Aristotle sets Anaxagoras, Anaximander, and Empedocles apart from those philosophers whose material principle is one, on the ground that for these three things are both one and many and generation is separation from the One of the pre-existent contraries. He knows that for all three the material cause principles are plural. His motive for reducing their principles to a unity is that he wishes to prove that these philosophers had a material principle that resembled his own prime matter. A similar motive is evident in a passage of *Metaphysics* A in which again the material principles of Anaxagoras are shown to be a unity.¹³⁷ This latter passage is probably the immediate source of Theophrastus' remark that Anaxagoras "would seem to mean" a single thing by his material cause. In this instance Aristotle is trying to identify *Nous* and the homoeomeries with his pair of causes, form and matter. He says that, "if it were assumed that Anaxagoras posited two elements, the supposition would be thoroughly in accord with an argument which Anaxagoras did not state but which he would have accepted if anyone had led him to it."¹³⁸ As Aristotle admits, he is not stating Anaxagoras' doctrine but is giving it a logical development that Anaxagoras had neglected.

At the beginning of his report Theophrastus, following *Metaphysics* A, has said that Anaxagoras explained apparent generation and destruction by aggregation and segregation, and later he has explicitly attributed this theory to him again.¹³⁹ But the consequence of the view that Anaxagoras' mixture is a single indeterminate thing is that this mechanism is no longer suitable, since every particle of the mixture will be identical with every other. Theophrastus does not say what he now conceives the generative process to be. But, in the opening sentence of the passage in which this account occurs, Simplicius

says that the principles of Anaxagoras are contrary; and, whether or not Simplicius is quoting from Theophrastus, this is undoubtedly how Theophrastus understands the homoeomeries, since contrariety is an essential part of Aristotle's interpretation of the mixture as a single thing.¹⁴⁰ Aristotle states what the contrariety means for Anaxagoras' theory of generation and distinction: the genesis of a specific thing is qualitative change.¹⁴¹ Thus, the homoeomeries are not physical ingredients of infinite variety, but contrary forces inherent in the mixture; and separation from the mixture is not a mechanical process but the actualization of the inherent contraries. What had started as a correctly and clearly stated doctrine of "like to like," in evidence of which Theophrastus produced Anaxagoras' own words, has now turned out to be a doctrine involving the specifically Aristotelian concept of contrariety.¹⁴²

With regard to the nature of the error of attributing this sort of contrariety to the Presocratics no more need be said. This instance is, however, particularly interesting, because both Aristotle and Theophrastus admit that their interpretation is possible only on the assumption that Anaxagoras did not understand or mean what he said. It shows, too, how far Theophrastus is prepared to go in accepting Aristotle's interpretations against the known facts of the doctrine interpreted. Further, the contradiction between this interpretation and the first one taken from *Metaphysics* A demonstrates again how Theophrastus can combine two or more of Aristotle's accounts without, apparently, being aware that they are made from fundamentally different points of view.

After his account of Anaxagoras, Theophrastus makes brief reference to Archelaus the Athenian.¹⁴³ He says that Archelaus was the student of Anaxagoras and, while trying to be original in cosmogony and other matters, made his principles the same as those of Anaxagoras. Aristotle does not refer to Archelaus by name in any extant work, nor does he refer in *Metaphysics* A to any follower of Anaxagoras who might be identified as Archelaus. Theophrastus' purpose is, evidently, to supplement Aristotle's account by naming a later philosopher whose doctrine would stand in somewhat the same relationship to that of Anaxagoras as Aristotle supposes the doctrines of Hippo, Diogenes, and Heraclitus stood to those of Thales, Anaximenes, and Hippasus.

The inexactness of the parallels between the principles of the earlier and later monists vouches little for Theophrastus' statement that Archelaus made his principles the same as those of Anaxagoras. The

doxographers agree that Archelaus posited *Nous* as the efficient cause.¹⁴⁴ But on his material cause they are divided, some saying that he posited an infinite number of dissimilar bodies from which things are produced by mechanical combination and separation,¹⁴⁵ and others that he posited infinite air which is subject to rarefaction and condensation.¹⁴⁶ Since these reports of the material principle are apparently both derived from the *Physical Opinions*, the latter one can therefore not be rejected simply on the ground that it disagrees with the statement quoted by Simplicius. No conclusive explanation of this disagreement can be offered, but the problem should be considered because it may suggest the origin of other such disagreements in the doxography. It is proposed that the report that the material principle consists of infinite dissimilar bodies is an unjustified extension of Theophrastus' statement, and that this report is due to unawareness of the limits placed on Theophrastus' comparisons by his use of the *Metaphysics* summary. Aristotle arranges principles by their functions as matter, source of motion, form, and end; and principles with the same functions are essentially the same and are distinguished secondarily by their number rather than by their specific character. Hence, Aristotle sums up his discussion of the material and efficient causes with the statement that those who posited only the material cause made it either one or more than one, and those who added an efficient cause similarly declared it to be single or twofold.¹⁴⁷ In *Metaphysics* A, Aristotle classes Anaxagoras with those who posited a plurality of material principles, but both he and Theophrastus favor the interpretation according to which Anaxagoras' matter is a single principle. On this interpretation Anaxagoras would fall in the class of those who posited a single material cause and a single efficient cause. If Archelaus' principles were air and *Nous*, he would fall in the same class; and within that class he would be most closely related to Anaxagoras because his efficient cause, being *Nous* rather than one of the elements, is the cause not only of motion but also of goodness and beauty in the universe. If this explanation is correct, the chief point of similarity is the *Nous*; and the similarity of the material principles is of secondary importance and depends on the Aristotelian view that Anaxagoras' mixture is a single body.

XENOPHANES

Simplicius' passage on Xenophanes consists of three elements:¹⁴⁸ the opening sentences, in one of which Theophrastus is referred to by

name and which may therefore be considered to be a quotation from or a paraphrase of the *Physical Opinions*; material derived from the late Peripatetic treatise *De Melisso, Xenophane, Gorgia*; ¹⁴⁹ and a polemic against Nicolaus, who held that Xenophanes' principle was immovable and infinite, and Alexander, who held that it was immovable, finite, and spheroid. Interspersed in the passage are quotations from Xenophanes' poetry, which are probably derived from Theophrastus through Alexander.

Simplicius begins his comments on Xenophanes with the statement that if the single principle of the monists is immovable it must be either infinite or finite as is held respectively by Melissus and Parmenides, who speak not of a material element but of a true being.¹⁵⁰ He says that, according to Theophrastus, Xenophanes, who was the teacher of Parmenides, asserted that the principle is one (i.e., that being, or the Universe, is one) but that it is neither finite nor infinite, neither in motion nor at rest. Notice of this doctrine, Theophrastus agrees, is appropriate to some investigation other than physics; for Xenophanes said that this One, or Universe, is the God.¹⁵¹

With this passage should be compared Aristotle's remarks on the Eleatics in the *Metaphysics*.¹⁵² He says that their views vary both in the excellence of their statement and in their conformity to nature. The discussion of them does not fit the present investigation into causes, because, unlike some physicists who generate the universe from their one principle, they say that the universe is immovable. This much is, however, appropriate to the present inquiry: Parmenides seems to fasten on what is one in definition, Melissus on what is one in material, and the former therefore says it is finite, the latter that it is infinite; while Xenophanes, who was the first of the partisans of the One and whose pupil Parmenides is said to have been, gave no clear statement and seems not to have grasped the nature of either of these causes, but with reference to the whole universe he says the One is God. Aristotle concludes that Xenophanes and Melissus must be omitted from the present inquiry because they are a little too naive.

The agreement between these two passages as to the connection of Xenophanes with Parmenides, Xenophanes' doctrine that the One is God, and the unsuitability of the Eleatic doctrine to the discussion of physical causes, is sufficient to indicate that Theophrastus has derived his account from that of Aristotle. There are, however, two essential differences. Theophrastus says that the One of Xenophanes is neither in motion nor at rest; Aristotle says that the universe of the Eleatics is immobile. Theophrastus says that the One of Xenophanes

is neither infinite nor finite; Aristotle says that Xenophanes posited neither the One of Parmenides, which is one in definition and finite, nor the One of Melissus, which is material and infinite. If, therefore, Theophrastus has taken his account from Aristotle's, it is evident that he has misunderstood Aristotle's meaning. The distinction that Aristotle is making between Parmenides and Melissus is that the principle of the former was apparently conceptual and of the latter, material; the distinction between their principles as to being finite and infinite is introduced only parenthetically as what Aristotle believes to be a consequence of the former distinction.¹⁵³ Hence, when Aristotle says that Xenophanes seems to have grasped neither of these causes, he means, not that Xenophanes had declared the One to be neither finite nor infinite, but that he had apparently failed to grasp either the formal or material aspect of the One. Secondly, Aristotle is not giving a positive description of Xenophanes' doctrine; he is admitting his own lack of evidence for classing Xenophanes with either Parmenides or Melissus. Xenophanes had, according to Aristotle, simply said that the One is God. Being unable to decide with which of the four causes the One is to be ranked, Aristotle concludes that whatever Xenophanes meant it was something different from the doctrines of Parmenides and Melissus. What amounts to a confession of ignorance is, then, apparently converted by Theophrastus into a definite statement that Xenophanes denied the spatial attributes that Parmenides and Melissus had ascribed to their One.¹⁵⁴

That Theophrastus should have so misunderstood Aristotle would be surprising. Further consideration will show, however, that he probably did not. The interpretation of Alexander against which Simplicius is citing Theophrastus, that the One is finite and immobile, is attested by several doxographers who stand in different lines of the transmission from the *Physical Opinions* and is, therefore, almost certainly that of Theophrastus himself.¹⁵⁵ The conclusion must be, then, that Theophrastus has contradicted himself, or that either Simplicius or Alexander has misrepresented Theophrastus' account. The evidence points to Simplicius. Part of his account is certainly derived from the *De Melisso, Xenophane, Gorgia*. In this treatise it is stated that Xenophanes held the One to be neither in motion nor at rest and neither finite nor infinite.¹⁵⁶ It would appear that the treatise was the source of Simplicius' statement to the same effect and that Simplicius had confused the account given in the treatise with that of Theophrastus. For the statement that Xenophanes denied both motion and rest there can hardly be any other explanation; it

is inconceivable, quite apart from the evidence of the doxographers, that Theophrastus should consider Xenophanes an Eleatic and yet state that Xenophanes had denied one of the fundamental tenets of the Eleatics, the immobility of being. But, if this is Simplicius' addition, it does not follow that there was nothing in Theophrastus to correspond to his statement that the One of Xenophanes is neither finite nor infinite.¹⁵⁷ It must be imagined that there was some point of contact between the *De Melisso, Xenophane, Gorgia* and the account of Theophrastus that led Simplicius to believe the interpretations identical. The simplest explanation is offered by the supposition that, in Theophrastus' account, as in Aristotle's, the distinction as to whether the One is finite or infinite applied not to Xenophanes but only secondarily to the distinction between the conceptual principle of Parmenides and the material principle of Melissus, and that Xenophanes had been distinguished from the other Eleatics by his failure to specify whether his principle was conceptual or material. If this had been the case, Simplicius' confusion might be understandable. In the part of his commentary in which this interpretation occurs, he is asking only whether the principle is finite or infinite, in motion or at rest. His concern with the question at hand might well cause him to mistake the basis on which the Eleatics are being compared and so to overlook the fundamental difference between Theophrastus and the *De Melisso, Xenophane, Gorgia*. The original statement, "Xenophanes does not say whether the One is conceptual (and finite) like that of Parmenides or material (and infinite) like that of Melissus," would then become, "Xenophanes says that his One is neither finite like that of Parmenides nor infinite like that of Melissus." Having made the two accounts square in this way, Simplicius would naturally conclude that they were identical and that Alexander's further quotations from Theophrastus to the effect that the One of Xenophanes is spheroid, limited and immobile must be in error because irreconcilable with the *De Melisso, Xenophane, Gorgia*.¹⁵⁸

More important than the exact details of Theophrastus' account is the fact that he has included Xenophanes in the *Physical Opinions* at all. Aristotle speaks of Xenophanes' principle without confidence and acknowledges that Xenophanes has no place in the history of causality. His only reason for mentioning Xenophanes appears to be that he is hesitant to omit him in view of Plato's statement in *The Sophist* that the Eleatic sect began with Xenophanes or still earlier.¹⁵⁹ There is no more justification for treating this statement as historical than there is for so treating the doctrinal connection that

Plato suggests between the Heracliteans and Homer.¹⁶⁰ Nevertheless, Aristotle not only concludes that Xenophanes was a true Eleatic; but, by ignoring Plato's qualification that the Eleatic sect *may* have begun still earlier, he makes Xenophanes the founder of the school; and he apparently assumes that, since Parmenides was the earliest of the other known Eleatics, he was the pupil of Xenophanes. Aristotle's uncertainty about the supposed relationship of Xenophanes and Parmenides is revealed by his reference to it as hearsay. In Theophrastus and the doxographers, however, hearsay becomes a fact; and to complete the Eleatic line of descent Theophrastus adds that Xenophanes was the pupil of Anaximander — apparently on no other grounds than Aristotle's questionable supposition that the Eleatic doctrine was an outgrowth of and a reaction against the Ionian monism.¹⁶¹

Plato's reason for linking Xenophanes with the Eleatics must have been something in the poems that seemed to foreshadow an essential feature of the Eleatic doctrine — perhaps such lines as those in which Xenophanes says, "God ever abideth in the selfsame place, moving not at all, etc."¹⁶² Theophrastus at least seems to have taken these lines as proof of the immobility of the One.¹⁶³ From the other fragments of Xenophanes, however, it appears more likely that these lines are part of an attack on the current anthropomorphic polytheism than a philosophical denial of change.¹⁶⁴ He says that God is one;¹⁶⁵ but it is quite clear from the rest of the fragment in which this sentence occurs that he does not mean that the One is God, as Aristotle and Theophrastus assert, although it is conceivable that the sentence might be twisted to give this sense if one were convinced beforehand that he was an Eleatic. Furthermore, there is no evidence in the fragments that, as Aristotle and Theophrastus say, he identified God with the world¹⁶⁶ nor, on the other hand, that he believed that God is real and the phenomenal world is not. God is said to be in supreme control of the world,¹⁶⁷ but the plurality and change of the phenomenal world are apparently recognized as no less real.¹⁶⁸ Admittedly, the fewness of the extant fragments and the doubts as to their context in the poems as a whole make their evidence inconclusive. But if Aristotle had any more conclusive evidence, it is difficult to explain the non-committal tone of his remarks; and the accounts of the doxographers do not suggest that Theophrastus had made use of much more than the fragments now available.¹⁶⁹ The systematic treatment in the doxography is apparently due only to Theophrastus' acceptance of Aristotle's evaluation of the *Sophist* passage and to his

subsequent attempt to fill in the details from Xenophanes' poems. Ultimately, then, Xenophanes, the Eleatic of the doxographers, has no apparent basis but a passing remark of Plato.

PARMENIDES

Theophrastus' account of Parmenides is to be reconstructed from quotations by Alexander, Simplicius, and Diogenes Laertius.¹⁷⁰ It is as follows. The philosophy of Parmenides took two different directions, the Way of Truth and the Way of Opinion.¹⁷¹ According to the Way of Truth, the universe is one, ungenerated, eternal, limited, and spherical.¹⁷² Parmenides proved the unity of the whole by this reasoning: That which is besides the existent is non-existent; the non-existent is nothing; therefore the existent is one.¹⁷³ To explain the generation of phenomena in accordance with the opinion of the many, however, Parmenides posited fire and earth as the efficient cause and material cause, and he said that from the warm and the cold all things are created.¹⁷⁴

This is a paraphrase and conflation of elements from two passages in the *Metaphysics*. In the first, Aristotle asserts that the Eleatics, unlike the Ionians, recognized the necessity of an efficient cause to explain motion and that, since they failed to discover this cause, they declared that the unity of being is motionless and denied not only generation and destruction but all change.¹⁷⁵ Among them, he believes, Parmenides alone might be said to have been aware of the efficient cause, and he only inasmuch as he employed in a sense two causes. Recognition of the efficient cause is easier, Aristotle believes, for those who employ more than one principle, e.g., warm and cold, or fire and earth; for they treat fire as the source of movement and the other primary bodies as that which is moved. In the following chapter he repeats that, while the physicists generated the universe from their one principle, the Eleatics asserted that being is motionless.¹⁷⁶ He says that Parmenides seems to have grasped that which is one in definition and therefore said that it is limited. Parmenides had reasoned that, since there is no non-existent, being is one and nothing else is. But, being constrained to follow the phenomena and holding that while only the One exists according to definition many things exist according to sensation, he set up two causes, fire and earth, the former of which he ranked with being and the latter with non-being.

The similarities between the accounts of Theophrastus and Aris-

totle are so obvious as to require no comment. The interpretation given of Parmenides makes him not only a monist who, because of his denial of motion, cannot be properly included in the history of causality,¹⁷⁷ but also a material pluralist who had anticipated the Peripatetic material and efficient causes. The treatment of him as a monist is substantiated by the fragments from the first part of his poem. The treatment of him as a pluralist is based on the supposition that the second part of his poem is as much a presentation of his own views as the first is. This supposition is incorrect; for, at the beginning of the second part, he warns that he has come to the end of his trustworthy speech and thought about the truth, and that henceforth he will give the beliefs of mortals in the deceptive ordering of his words.¹⁷⁸ Furthermore, the principles that Parmenides speaks of in the second part of the poem are not fire and earth, but "the heavenly fire of flame" and "dark night."¹⁷⁹ The identification of night with earth is due to Aristotle's attempt — with complete disregard for Parmenides' words — to find qualitative contrariety in Parmenides by making his supposed principles square with the two limiting terms of the four simple bodies.¹⁸⁰ In order that Parmenides may be treated within the Peripatetic scheme of causality, it is assumed that of the two contrary principles the one must be material and the other efficient. The decision that fire is the active principle rests on the assumption that what Parmenides really meant was the Peripatetic warm; from this it follows that the other principle must be passive. There is nothing in Parmenides' poem to justify this interpretation. He does not say which of the principles is active and which passive, nor does he give any indication that he thinks heat to be the exclusive characteristic of fire and cold of night.

Although Theophrastus accepts Aristotle's interpretation of Parmenides' poem as regards the identification of fire and earth with the efficient and material causes, he himself gives evidence against this interpretation. Aristotle says that Parmenides set up fire and earth as causes because he was constrained to follow the phenomena. Theophrastus, on the other hand, says that Parmenides' aim was to explain the generation of phenomena according to the opinion of the multitude; and the care with which he distinguishes the two parts of the poem shows clearly that he is aware that the second part of the poem does not represent Parmenides' orthodox doctrine.¹⁸¹ The fact that he nevertheless, like Aristotle, includes the second part of the poem in his historical treatment of Parmenides reveals how much he is disposed to follow the pattern of Aristotle's accounts even when,

as here, he appears to know that Aristotle's interpretation is contrary to the Presocratic writings. In the *De Sensibus* he disregards the distinction he has made here between the two parts of the poem and derives his report of Parmenides' psychology from the Way of Opinion without giving a hint that the views he is stating are not Parmenides' own.¹⁸²

By his practice of excerpting particular passages from Aristotle, Theophrastus has here again, through the doxographers, given currency to an interpretation that rests on the sole authority of Aristotle but is at the same time only one of several interpretations made by Aristotle. Not only does Aristotle identify fire and night with the efficient and material causes; even in one of the passages from which Theophrastus has borrowed he places in opposition to fire not earth alone but also water and the other simple bodies,¹⁸³ and he associates fire with being, and earth with non-being.¹⁸⁴ In another passage, in which he is seeking to establish Hesiod and Parmenides as fore-runners of Empedocles, he equates Love, not fire, with the efficient cause.¹⁸⁵ The same variation is found in the treatment of Parmenides' One. Theophrastus evidently takes the One to be corporeal.¹⁸⁶ The corporeality of the One is certainly implied by Aristotle's attempt in *Metaphysics* A to establish a historical relationship between the Eleatics and the Ionian monists.¹⁸⁷ Elsewhere he states explicitly that neither Parmenides nor Melissus believed that anything exists apart from sensible substance.¹⁸⁸ But the very fact that he accepts the second part of the poem as a statement of Parmenides' own doctrine shows in itself that he thinks the first part is not physical in the same sense as the second; and when he distinguishes Parmenides from Melissus he says that the former *seems* to have held that the One is conceptual, and the latter that it is material.¹⁸⁹ This divergence in his accounts suggests strongly that it is not clear to him from Parmenides' writings what the nature of the One is.¹⁹⁰ The first interpretation might seem to be justified by the concrete language used by Parmenides of the One,¹⁹¹ and the second might in part be prompted by the suspicion that the description of the One is purely metaphorical. Ultimately, however, the first interpretation rests on the assumption that the Eleatic doctrine must have been a correction of Ionian monism in the direction of his own system; the second is only his conclusion of what he thinks must logically have been the distinction between Parmenides and Melissus. Neither of his interpretations, therefore, is decisive evidence one way or the other; and what has already been noticed of Theophrastus' technique of compilation does

not support the belief that his choice of the one interpretation gives to that interpretation any greater authority.

THE ATOMISTS

Theophrastus reports that Leucippus, according to two different traditions, was said to be an Eleatic and a Milesian, and that he shared the philosophy of Parmenides but took the opposite direction to Parmenides and Xenophanes in his explanation of things.¹⁹² They maintained that the All is one, indivisible, uncreated, and finite, and they agreed not even to investigate non-being; but he posited as elements the atoms, which he believed to be in constant motion and innumerable. He made the shapes infinite in number because he thought there was no reason why they should be of one sort rather than of another and because he observed that generation and change are unceasing. He held, further, that being is no more real than non-being but that both are causes in the generation of things; for, supposing the substance of the atoms to be compact and full, he called them being, and he said that they are moved in the void, which he called non-being. At this point Theophrastus interrupts his account to say that in like manner Leucippus' associate, Democritus, made his principles the full and the void, calling the one being and the other non-being. Positing the atoms as material, he and Leucippus generated other things by the differences of the atoms. These differences they thought to be three — rhythm, intercontact, and turning, i.e., shape, order, and position.¹⁹³ Theophrastus now returns to the main line of his account with a statement intended to explain the movement of the atoms in the void. Leucippus and Democritus, he says, held that like is naturally moved by like, that things akin are borne to each other, and that when each shape is inserted into a new aggregation it produces a different arrangement. Thus, by their infinite principles, Leucippus and Democritus professed that they alone could give a reasonable explanation of all modifications and substances, as well as of the cause and manner of generation.

It will be seen that Theophrastus' digression on the similarity between the doctrines of Leucippus and Democritus closely follows Aristotle's brief report of atomism in *Metaphysics A*.¹⁹⁴ Aristotle says that Leucippus and his associate, Democritus, made their principles the full and the void, calling the one being and the other non-being.¹⁹⁵ As the monists generated all other things by modification of their principle by the rare and the dense, so these two said that

differences in matter are the causes of other things. These differences, they thought, are rhythm, intercontact, and turning, i.e., shape, order, and position.¹⁹⁶ Aristotle ends by saying that, like the others (i.e., the monists), Leucippus and Democritus neglected the cause and manner of motion. This is undoubtedly what Theophrastus means by saying that they believed that like is *naturally* moved by like; that is, the atomists did not supply a separate cause of motion but, like the Milesians, they simply made motion a property of matter.¹⁹⁷

With the main body of Theophrastus' account should be compared the passage of the *De Generatione* in which Aristotle gives what he supposes to have been the antecedents of atomism.¹⁹⁸ Aristotle says that some of the ancients believed that being must be one and motionless on the grounds that the void is non-being and that, without the void, motion and plurality would be impossible.¹⁹⁹ The same objection, they asserted, held true not only against the theory that there are many and a void but also against the theory that the universe is discretely-in-contact; for on the latter theory, if the universe is divisible throughout, there is no one and no many but only a void, and at the same time there can be no motion. Reasoning this way they were led to transcend sense-perception and to disregard it on the belief that one should follow the argument.²⁰⁰ Leucippus, however, thought that he had a theory that harmonized with sense-perception and would not abolish generation and destruction, motion, or plurality; and he made these concessions to phenomena.²⁰¹ He conceded that motion is impossible without a void and that the void is non-being; but he held that the full is not one but is composed of units which are infinite in number and are indivisible because of their minuteness. He said that the void exists and that the many move in it.²⁰² Generation and destruction he believed to be due to the aggregation and segregation of the many (i.e., the atoms), action and passion occurring wherever the many are in contact and generation being caused by their being put together and becoming intertwined.²⁰³

In these two passages Aristotle is considering atomism from two entirely different points of view and he gives two different representations of the theory. The result is that, by inserting the report derived from the *Metaphysics* into that derived from the *De Generatione*, Theophrastus has made his account self-contradictory. According to the interpretation taken from the *Metaphysics*, the atoms are distinguished by shape, order, and position; ²⁰⁴ in that taken from the *De Generatione*, shape alone is emphasized as if it were the sole distinguishing characteristic of the atoms, and the word "shape" is

used as if it were equivalent to "atom."²⁰⁵ In the account of the *Metaphysics*, all change is said to be due to the differentiation of the material substrate; and, by saying that the atomists substituted shape, order, and position for the rare and dense, Aristotle suggests that the atomists' mechanism of change in some way involved the interaction of contraries.²⁰⁶ Theophrastus repeats this interpretation, but in his very next sentence — now under the influence of the *De Generatione* — he says that the atomists believed that interaction occurs between similars and that both substantial and qualitative change result from a mechanical reordering of the atoms in the void.²⁰⁷

The conflation by Theophrastus of Aristotle's two accounts has had other more serious consequences for the history of atomism. In the opening statement Theophrastus has said that Leucippus was reported to be an Eleatic and a Milesian and that he shared the philosophy of Parmenides. This statement, along with doxographical testimonia to the effect that Leucippus was an Abderite and the student of Zeno,²⁰⁸ has been used to reconstruct not only Leucippus' own biography but also the personal and doctrinal connections between the schools of the Milesians, Eleatics, and atomists.²⁰⁹ Lest it be objected that Theophrastus is merely reporting well-known facts, it may be pointed out that Aristotle appears to know nothing of Leucippus' life except that Democritus the Abderite was his associate. Nor does Aristotle appear to know in what way the doctrine of Leucippus was related to that of Democritus or was like or unlike it; he identifies the two men to such an extent that he attributes the same doctrine now to both, now to one alone, and now to the other.²¹⁰ This identification has undoubtedly led the doxographers to infer that Leucippus was, like Democritus, an Abderite. The other biographical data reported by Theophrastus and the doxographers have been derived in the same way.

Theophrastus says that Leucippus "shared" the philosophy of Parmenides; but he proceeds to a statement of the differences between Leucippus and the Eleatics that would make it appear that Leucippus not only did not share any of Parmenides' philosophy but had in fact been utterly opposed to it. The *De Generatione* passage from which he has borrowed indicates what Theophrastus means by "shared." He is referring to what Aristotle conceives to have been the starting-point of the atomists, namely, Leucippus' acceptance of the Eleatic axioms that there can be no motion or plurality without a void and that the void is non-being. Aristotle does not mention any of the Eleatics by name. It is certain, however, that the axioms

referred to are those of Parmenides,²¹¹ and the application of these axioms against a universe composed of discretes-in-contact is apparently the attack of Zeno on Empedocles' restatement of the material pluralism that Parmenides had sought to refute.²¹² Insofar, then, as Leucippus accepted these axioms, he might be said to have shared the philosophy of Parmenides, as well as of Zeno, and he might be said to be in the Eleatic tradition. However, Aristotle also represents Leucippus as attempting to reconcile Eleatic logic with the plurality and change of the phenomenal world and, in *Metaphysics* A, classes him with the Milesian monists, who took motion for granted without troubling to explain it.²¹³ Leucippus might also, therefore, be said to have shared the philosophy of the physicists. In one fragment Theophrastus makes more explicit the connection that Aristotle believes to have existed between the doctrines of the Milesians and atomists.²¹⁴ He says that Democritus advanced his theory of the atoms because he thought the explanations based on the warm, cold, etc., were crude. By this interpretation the atomists are represented as accepting and correcting the physics of the Milesians as they had the logic of the Eleatics. Thus, with regard to the suppositions that Aristotle makes about the background of atomism in his two accounts, Leucippus might be said to be both an Eleatic and a Milesian. There need be no other basis for such a statement than the two Aristotelian passages noted. Theophrastus — or Simplicius and the other doxographers — apparently concluded that relationship of doctrine implied identity of birthplace, and that Leucippus not only owed part of his doctrine to Parmenides and Zeno but was also a pupil in the supposed Eleatic school. There is nothing in the Aristotelian passages to support these conclusions. Aristotle does not suggest that Leucippus was an Eleatic or Milesian by birth nor even that Leucippus had personal contact with any of the Eleatics. If he had been able to bolster his argument for the doctrinal connection between Leucippus and the Eleatics by reference to known facts of Leucippus' life, he would probably have done so.

But, even if by his double reference to Leucippus as an Eleatic and as a Milesian, Theophrastus intends to refer only to the doctrinal connections suggested by Aristotle, the historical validity of these connections is dubious. That the atomists were influenced by the Eleatics and attempted to answer the objections raised by them is beyond question. The impression given by Aristotle in the *De Generatione* and by Theophrastus in the part of his account derived from that work is, however, that the atomists considered the assertion of

the void's existence to be sufficient answer. Clearly it was not, and the atomists can hardly have thought that it was. When Melissus restated Parmenides' doctrine against Empedocles and Anaxagoras, he proved not only that the void is non-being but also that the initiation of movement by such forces as these philosophers had postulated is impossible.²¹⁵ To save phenomenal change, therefore, the atomists had also to assert that movement has no beginning but is eternal. Both Aristotle and Theophrastus appear to think that Leucippus did make this assertion.²¹⁶ But in the passages discussed here they gloss over this essential feature of Leucippus' doctrine as if it were due to his failure to supply efficient causality rather than to his attempt to defend himself against one of the main attacks to which Empedocles and Anaxagoras had been susceptible. Furthermore, they do not notice that it was not Parmenides or Zeno but Melissus who, while showing the impossibility of such a pluralism as Anaxagoras', had at the same time shown how a plurality could be made consistent with Eleatic logic. He argued that, if there are to be many things, each of them must have the same characteristics as the Eleatic One.²¹⁷ It was just this requirement that the atoms of Leucippus were intended to meet. But Aristotle and Theophrastus so underestimate the influence of Melissus on atomism, that Aristotle dismisses him with the comment that "some" believed the All to be infinite,²¹⁸ and Theophrastus makes no reference to him at all. Theophrastus says that the All of Parmenides is one, ungenerated, and finite, while Leucippus declared the atoms to be infinite and in continual movement and observed that change and generation is unceasing.²¹⁹ Theophrastus' purpose is to find as complete opposition as possible between the atoms and the Eleatic One, and to do this he must exclude the One of Melissus because it, like the atoms, is infinite. It will be noted, too, that, in so opposing the atomists to the Eleatics, Theophrastus obscures what was in fact a main point of agreement between the two groups; although they held opposed views regarding phenomenal change, they agreed that the principles are incapable of change. Whatever connection the atomistic doctrine may have had with the Milesian on the other hand, it is at least clear that the connection made by Aristotle is due to his belief that, since the atomists had not provided a source of motion comparable to his efficient cause, they must, like the Milesians, have failed altogether to account for motion. It is patently incorrect to imply that the atomists had ignored the question of movement and that by rejecting such forces as Anaxagoras' *Nous* they were simply returning to the Milesian view; and it

is equally incorrect to imply that, since they had neglected all the causes but the material, their explanation of change must be essentially the same as that of the Milesians.

Finally, the other reports of Theophrastus and Aristotle should be reviewed briefly in relation to those discussed above. It has been seen that in the *Metaphysics* account the atoms are distinguished by shape, order, and position and in the *De Generatione*, by shape alone. In the *De Sensibus*, however, Theophrastus recognizes, as Aristotle does in the *Physics* and elsewhere, that the atoms are also distinguished by size.²²⁰ The interpretation taken from the *Metaphysics* presupposes that change in some way involves contrariety, and, according to that of the *De Generatione*, change is due to the interaction of similars. But, having thus committed himself so positively on both sides of the question, in the first sentence of his account of Democritus' psychological theory in the *De Sensibus*, Theophrastus says that Democritus did not make it clear whether sense perception is due to the interaction of contraries or similars.²²¹ This avowal of ignorance is comment enough on the definiteness with which both conflicting notions are attributed to atomists in the *Physical Opinions* fragment. That Democritus did not specifically answer the question asked by Theophrastus in the *De Sensibus* is undoubtedly true; it would simply not occur to him to do so, since in his time all interaction was thought to be between similars. In his closer examination of Democritus in the *De Sensibus*, Theophrastus appears to recognize this fact when he attributes to Democritus the theory that like things best know like; ²²² but even then he is so predisposed to interpret Democritus in terms of the Peripatetic theory of sense perception that he cannot refrain from suggesting that Democritus subscribed to the same notion.²²³ Lastly, although in both the *Metaphysics* and *De Generatione* interpretations all change is made to result from a single process, in another passage Aristotle claims to find in the atomists the distinction between substantial and qualitative change.²²⁴ He says that generation and destruction are due to the aggregation and separation of the atoms and that alteration is due to order and position.

Theophrastus appends to his report of Leucippus and Democritus a brief account of Metrodorus the Chian. He says that, although Metrodorus pursued his own inquiry in other matters, he made his principles practically the same as those of Democritus and his associates; he set up as first causes the full and void, i.e., being and non-being.²²⁵ Aristotle does not mention Metrodorus by name; nor is there enough evidence, apart from the Theophrastean doxography,

to determine the exact relationship of his atomic theory to that of Democritus. Theophrastus has introduced Metrodorus as a later representative of the atomistic theory, and he has applied to him the account given of Leucippus and Democritus in the *Metaphysics*.²²⁶

CONCLUSION

It has been seen that Theophrastus' treatment of Presocratic causes owes not only its general point of view but also much of the detail of its organization and wording to the *Metaphysics* A summary, and that his departures from that summary are usually only for the purpose of gathering additional material from Aristotle's other accounts and from the works of the Presocratics. The improbabilities and demonstrable errors that arise directly from his close adherence to one or other of Aristotle's accounts need not be retold here. I take it as self-evident that, when he merely copies or paraphrases an erroneous or improbable account from Aristotle, his copy or paraphrase is no better or worse than its original. There remains to consider briefly some of the features of his work that, although due to his use of Aristotle, are due to his method of using the text of Aristotle rather than to Aristotle's intentions.

1) Theophrastus' practice of supplementing the *Metaphysics* summary with statements made by Aristotle in other contexts often causes his accounts to be a bewildering patchwork of ill-fitting pieces. In *Metaphysics* A, Aristotle does not say what mechanism of change was used by the Milesians. In the *Physics* (187 A 12-16) he says that all physical monists accounted for change by rarefaction and condensation. This latter statement Theophrastus applies not only to Anaximenes and Diogenes, of whom it is true; he also applies it to Hippasus and Heraclitus, of whom, as Aristotle knows, it cannot be true (see pages 93 ff.). Aristotle omits Anaximander from the *Metaphysics* summary. Theophrastus resorts, therefore, to two *Physics* interpretations in one of which Anaximander is a monist and in the other, both a monist and pluralist. The contradiction in the second interpretation, Theophrastus pretends to solve by accepting Aristotle's patently false identification of the primordial mixture with undifferentiated matter (see pages 100 f.). Similarly, according to the account taken from the *Metaphysics*, Anaxagoras is said to have posited infinite material principles, but by the interpretation just mentioned he becomes, like Anaximander, a monist (see pages 113 f.). In Empedocles Theophrastus finds the inconsistency that some-

times the material principles are four and sometimes six. This inconsistency, however, is due not to failure on the part of Empedocles but to Theophrastus' juxtaposition of two separate interpretations of Aristotle, the latter of which rests on the view that Empedocles' Sphere is a homogeneous compound (see pages 107 f.). The atomists, according to the interpretation of the *Metaphysics*, differed from the Milesians only in substituting shape, order, and position for the rare and dense; but by the interpretation taken from the *De Generatione* their doctrine is related to the Eleatics, and a different account is given of their material principles and of their theory of change (see pages 124 f.). This sort of confusion and contradiction was probably characteristic of all Theophrastus' doxographical writings; for some of the accounts in the *De Sensibus* are not only inconsistent with the accounts of the principles but also contain inner contradictions (see page 128).

2) The interpretations that Theophrastus has borrowed from Aristotle are often only one or two out of several different interpretations that Aristotle offers of a theory. It cannot be said that Theophrastus' use of one interpretation gives that interpretation added weight unless we are prepared to maintain that he has considered the merits of the various possibilities, has chosen one, and has consciously discarded those that do not agree with it. The contradictions observed in the preceding paragraph would be impossible if this were the case. The factor that governed his selection was clearly the availability of material. In *Metaphysics A* he found Aristotle's most comprehensive discussion of causal theories; from this he went to other passages in which Aristotle discusses several doctrines in a small space, notably *Physics A.4* and *De Generatione A.8*; and he referred to special discussions of individual philosophers only when, as for Anaximander, these general passages were inadequate. This method is almost bound to do injustice both to the author excerpted and to the facts of the doctrines discussed. Even if Aristotle's interpretations are all influenced by his own beliefs, it is clear — and must have been to him — that some are more in accord with the stated doctrines of the Pre-socratics than others are. As it happens, some of the accounts in the passages that Theophrastus has used are sheer conjecture, whereas some that fall in passages that Theophrastus has not used are undoubtedly nearer the truth, e.g., Aristotle's report of how Heraclitus described change (see page 95).

3) The fact that Theophrastus extracts Aristotle's interpretations from their contexts is a frequent source of misrepresentation and con-

fusion. Aristotle's interpretations are not doxographical accounts; they are parts of philosophical debates in which he is far from being a disinterested judge (Cherniss, pp. 347-350). The context usually warns us of the particular twist that he is likely to give a doctrine. In Theophrastus there is no such warning, and when he recasts Aristotle's arguments they assume the form of straightforward exposition. Needless to say, our lack of context becomes especially serious when Theophrastus compounds his report from two or more different passages, in each of which Aristotle's argument depends on a different set of assumptions about a doctrine. This difficulty is well illustrated by Theophrastus' double interpretation of Anaximander and Anaxagoras; for without the context of Aristotle we do not know on what grounds the material cause of these philosophers can be regarded as both singular and plural.

4) Theophrastus does not always reproduce accurately the details of the accounts that he has borrowed. Sometimes the inaccuracies are of slight importance, but they should be noted because they are characteristic of the sort of change that has frequently taken place between the original statement of Aristotle and the statement as it appears in the later doxographers. It has been seen how Aristotle's conjecture about the views of Thales has, through the *Physical Opinions*, hardened into a definite statement that Aristotle deliberately avoided (see pages 92 f.). One further example should be added. The basis of the doxographical tradition about early notions of matter is the equation with Aristotelian prime matter. This equation is derived by Theophrastus from the *Metaphysics*, but Theophrastus has neglected the qualification that Aristotle attaches to it. Aristotle prefaces his discussion of the early material principles with a reference to them as principles "in the form of matter" (*Metaphysics* 983 B 7) and thus indicates that these principles, being elements or some other definite bodies, are not primitive matter in his sense at all and that therefore the similarity between these principles and his own is at best very limited.

5) Two special types of misrepresentation that are caused by Theophrastus' disregard for Aristotle's precise words should be mentioned. First, he tends to overinterpret Aristotle's statements. When Aristotle says, for example, that the principle of Thales and Hippo was water, that of Anaximenes and Diogenes air, and that of Hippasus and Heraclitus fire, he probably means no more than that. There is no reason to conclude, as Theophrastus apparently does, that when he elsewhere refers to anonymous doctrines whose prin-

ciples were the elements, he is referring to the members of these pairs. His attribution of rarefaction-condensation to the monists as a group is only what follows from the presuppositions of his own system, and his failure to mention names is perhaps to be explained by his lack of definite evidence. Furthermore, when he links two philosophers with respect to one theory, it does not follow that when he mentions one member of the pair elsewhere he must mean both. So, although Theophrastus was right in understanding him to mean that the material causes of Anaximander and Anaxagoras were similar, it does not necessarily follow, as Theophrastus supposes, that he means that Anaximander subscribes to Anaxagoras' homoeomery theory. Much of the later doxographical tradition relating to little known figures like Thales and Hippasus is probably due to over-interpretation of this sort.

6) A second kind of overinterpretation is the development of biography from doctrinal affinities. The most striking example of this is the connection that Theophrastus makes between the Milesians, Eleatics, and atomists. From Aristotle's logical reconstruction of the relationship of their doctrines, Theophrastus has produced a scheme of teacher-student relationships: Anaximander-Xenophanes-Parmenides-Leucippus-Democritus (see pages 118 f. and 125 f.). Similar in origin are probably also the links Parmenides-Empedocles and Archelaus-Socrates (see notes 90 and 143). The series Thales-Anaximander-Anaximenes-Anaxagoras-Archelaus, which appears consistently in the doxographers, probably starts with Theophrastus and may have been derived in the same way (see note 117). It may be objected that Theophrastus was in the position to know such facts about the lives of at least the later Presocratics. But Aristotle, who might be expected to be no less well informed than Theophrastus, reports only that Parmenides "is said" to have been the student of Xenophanes and that Democritus was the associate of Leucippus. This fact is significant because one of the premises of the *Metaphysics* summary is the continuity in the evolution of causal theory, and the biographical connections stated by Theophrastus coincide to a marked degree with what Aristotle imagines the course of this evolution to have been. Those who will not concede that Theophrastus has made history out of logic must explain why Aristotle has failed to confirm his logic by history.

7) The common supposition that Theophrastus made use of the original writings of the Presocratics is supported, in the fragments studied, by his quotations from almost all the major Presocratics

after Thales. The texts of the Presocratics are, however, no protection against the influence of Aristotle, for in almost every instance the meaning of the quotation is distorted in order to yield proof of an Aristotelian interpretation that is clearly impossible. Thus, Anaximander's metaphor about justice is proof of Aristotelian contrariety (see pages 98 f.); Heraclitus' figure about the exchange of things for fire is interpreted as evidence of rarefaction-condensation (see page 94); verses from Empedocles are quoted as proof that he posited six material principles (see pages 107 f.); Anaxagoras is rightly quoted to the effect that the nature of things is due to the predominance in them of one kind of particle, and the process of generation is rightly understood to be the movement of like to like, but a few lines later the primitive mixture is treated as a unified substratum of qualitative change (see pages 112 ff.); and, although Theophrastus has apparently referred to enough of Parmenides' poem to know that the second part of it is the opinion of the multitude, he nevertheless accepts Aristotle's interpretation which is based on this part (see pages 121 f.). Furthermore, there is no indication that in compiling his accounts of the causal theories he made use of much more — if any more — of the original writings than he quotes. Several of his quotations appear to be the basis of the Aristotelian interpretation that he repeats. This suggests that he may not have consulted the complete texts of the Presocratics at all but may have referred to a collection of excerpts made for use in the Lyceum.

In sum, the fragments considered disclose no evidence that Theophrastus employed his knowledge of the Presocratics in such a way as to exercise independent judgment about them. Despite his apparent investigation of the original texts, his accounts are in all essentials simply repetitions of some of the interpretations that he found in Aristotle and have, therefore, the same deficiencies. Further, by his method of selection and adaptation he has frequently misrepresented his source and has exaggerated the faults present in it. It must be concluded that, with regard to the Presocratic causes at least, he is a thoroughly biased witness and is even less trustworthy than Aristotle.

NOTES

1. The writer wishes to record his gratitude to Professors H. F. Cherniss and E. A. Havelock, who both urged the undertaking of this study and have generously read the manuscript and made many suggestions for its improvement.

The fragments of the *Physical Opinions* will be cited by page and line in Hermann Diels, *Doxographi Graeci* (Berlin, 1879), which will be referred to in notes as *Dox.* Theophrastus' *De Sensibus* will be cited by section or by page and line of the text in *Doxographi Graeci*. The fragments of the Presocratics will be cited by number or by volume, page, and line of Hermann Diels, *Die Fragmente der Vorsokratiker* (5th ed. by W. Kranz, Berlin, 1934-37). The works of Aristotle will be cited by page, column, and line of the Prussian Academy edition (Berlin, 1831); and the Aristotelian commentators, by page and line of the Prussian Academy edition (Berlin, 1882-1909).

Abbreviations of modern books frequently cited are:

Burnet = John Burnet, *Early Greek Philosophy* (4th ed., London, 1945),

Cherniss = Harold Cherniss, *Aristotle's Criticism of Presocratic Philosophy* (Baltimore, 1935),

Zeller = Edward Zeller, *Die Philosophie der Griechen*, I, 1 (7th ed., Leipzig, 1923); I, 2 (6th ed., Leipzig, 1920).

2. Hermann Usener, *Analecta Theophrastea*, pp. 25-43.

3. *Dox.*, pp. 1-263. Diels's main conclusions about the nature and influence of the *Physical Opinions* are stated briefly, along with references to more recent bibliography, by Otto Regenbogen, Pauly-Wissowa, *Real-Encyclopaedie der classischen Altertumswissenschaft*, Supplement VII, pp. 1535-1539. Briefer statements are to be found in Burnet, pp. 33-39 and T. L. Heath, *Aristarchus of Samos*, pp. 1-6. Useful diagrams of the doxographical tradition are given by Heath (*loc. cit.*) and by W. Capelle at the end of his *Die Vorsokratiker*.

4. E. Zeller, "Über die Benützung der aristotelischen Metaphysik in den Schriften der älteren Peripatetiker," *Abhandlungen der Königlichen Academie der Wissenschaften zu Berlin*, 1877, pp. 145-167.

5. *Loc. cit.*, p. 155.

6. Note especially Cherniss, pp. 347-374.

7. Cherniss, pp. 218 and 359-361.

8. On the composition of the *Physical Opinions*, see *Dox.*, pp. 102-107 and H. Diels, "Leukippos und Diogenes von Apollonia," *Rh. M.*, XLII (1887), pp. 7 ff.

9. *Physics* 203 B 3-4, 16-18; *De Caelo* 303 B 10-13.

10. *Physics* 205 A 25-27.

11. This interpretation undoubtedly became current among the doxographers as the result of Stoic epitomes and collections of excerpts from the *Physical Opinions* such as that named the *Vetusta Placita* by Diels. Diogenes Laertius (IX, 8) and Aetius (I, 5, 5), both under Stoic influence, give this interpretation.

12. Simplicius, *Phys.*, p. 458, 23-25.

13. *Ibid.*, p. 24, 13-16. On the probable meaning of this statement, see note 46.

14. *Dox.*, pp. 108 ff. K. Reinhardt (*Parmenides*, p. 92, n. 1) thinks that Simplicius used the original text of Theophrastus; but the basis of his argument is improbable. See note 149.

THALES AND HIPPO

15. Compare the correspondingly numbered underlined parts of the following two passages:

Physical Opinions, fr. 1 (= *Dox.*, p. 475, 2-14 = Simplicius, *Physics*, 23, 22-33):

Θαλῆς μὲν Ἐξαμύνου Μιλήσιος καὶ Ἰππῶν, ὃς δοκεῖ καὶ ἄθεος γεγονέναι, ⁽¹⁾ ὕδωρ ⁽²⁾ ἔλεγον τὴν ἀρχὴν ἐκ τῶν φαινομένων κατὰ τὴν αἰσθησιν εἰς τοῦτο προαχθέντες· καὶ ^(a) γὰρ τὸ θερμὸν τῷ ὑγρῷ ζῆ ^(b) καὶ τὰ νεκρούμενα ξηραίνεται καὶ τὰ σπέρματα πάντων ^(c) ὑγρὰ καὶ ἡ τροφή πᾶσα χυλώδης· ἐξ οὗ δέ ἐστιν ἕκαστα, τούτῳ καὶ τρέφεσθαι πέφυκε· ⁽³⁾ τὸ δὲ ὕδωρ ἀρχὴ τῆς ὑγρᾶς φύσεώς ἐστι καὶ συνεκτικὸν πάντων· διὸ πάντων ἀρχὴν ⁽⁴⁾ ὑπέλαβον εἶναι τὸ ὕδωρ καὶ τὴν γῆν ἐφ' ὕδατος ἀπεφάνησαν κείσθαι. ⁽⁵⁾ Θαλῆς δὲ πρῶτος ⁽⁶⁾ παραδέδοται τὴν περὶ φύσεως ἱστορίαν τοῖς Ἑλλήσιν ἐκφῆναι, πολλῶν μὲν καὶ ἄλλων ⁽⁷⁾ προγεγονότων, ὥς καὶ Θεοφράστῳ δοκεῖ, αὐτὸς δὲ πολὺ διενεγκὼν ἐκείνων ὥς ἀποκρύψαι πάντας τοὺς πρὸ αὐτοῦ· λέγεται δὲ ἐν γραφαῖς μηδὲν καταλιπεῖν πλὴν τῆς καλουμένης ⁽⁸⁾ Ναυτικῆς ἀστρολογίας.

Aristotle, *Metaphysics* 983 B 20-30:

Θαλῆς μὲν ὁ τοιαύτης ἀρχηγὸς φιλοσοφίας ⁽¹⁾ ὕδωρ εἶναι φησιν (διὸ καὶ τὴν γῆν ἐφ' ⁽²⁾ ὕδατος ἀπεφάνησαν εἶναι), λαβὼν ἴσως τὴν ὑπόληψιν ἐκ τοῦ πάντων ὄντων ⁽³⁾ τὴν τροφήν ^(a) ὑγρὰν οὖσαν καὶ αὐτὸ τὸ θερμὸν ἐκ τούτου γιγνόμενον καὶ τούτῳ ζῶν (τὸ δ' ἐξ οὗ ^(b) γίγνεται, τοῦτ' ἐστὶν ἀρχὴ πάντων), διὰ τε δὴ τοῦτο τὴν ὑπόληψιν λαβὼν ταύτην, ⁽³⁾ καὶ διὰ τὸ πάντων τὰ σπέρματα τὴν φύσιν ὑγρὰν ἔχειν, ⁽⁶⁾ τὸ δὲ ὕδωρ ἀρχὴν τῆς φύσεως ^(c) εἶναι τοῖς ὑγροῖς· εἰσὶ δὲ τινες οἱ καὶ τοὺς παμπάλαιους καὶ πολὺ πρὸ νῦν γενέσεως ⁽⁷⁾ καὶ πρῶτους θεολογήσαντας οὕτως οἰοῦνται περὶ γενέσεως ὑπολαβεῖν· κτλ.

Cf. also Aetius, 1,3,1.

Several minor points in the Theophrastus text should be noted:

(1) τὰ νεκρούμενα ξηραίνεται (*Dox.*, p. 475, 5-6). Cf. ἀμοιροῦντα δὲ ξηραίνεται (Aetius, 1,3,1). Both sentences are from Theophrastus, but neither one represents the original form completely. In the Simplicius quotation it has just been stated that the warm lives by the moist, and we expect the converse statement that, when the warm is deprived of moisture, it dies. The lack of reference to the connection between moisture and life in Aetius deprives his sentence of significance in the present context. Hippo, whose doctrine is undoubtedly being represented here, is reported to have said, ὅταν δὲ ἀναξηρανθῇ, ἀραισθητεῖ τε ζῶιον καὶ ἀποθνήσκει (*Vors.*, I, p. 386, 26 = Anonymi Londonensis, *Iatrica*, XI, 27-28).

Theophrastus probably wrote something like this: τὰ ἀμοιροῦντα (ἢ ἀμοιρα ὄντα) ξηραίνεται καὶ ἀποθνήσκει. (The verb νεκρῶ used by Simplicius is apparently not found before Galen.)

(2) ἐξ οὗ δέ ἐστιν ἕκαστα, τούτῳ καὶ τρέφεσθαι πέφυκε (*Dox.*, p. 475, 7). Nothing in Aristotle or Aetius corresponds exactly to this. It makes sense only as an argument that since seed is moist nurture must be. In this case it is superfluous,

since Theophrastus has already stated in his preceding sentence that Thales and Hippo observed that both seed and nature are moist. Theophrastus does not give the connection between this observation and the assertion that water is the principle. Aristotle makes the connection by saying τὸ δ' ἐξ οὗ γίγνεται, τοῦτ' ἐστὶν ἀρχὴ πάντων (*Metaphysics* 983 B 24-25). It is suggested that Theophrastus, too, had originally written something of this sort, e.g., ἐξ οὗ δέ ἐστιν ἕκαστα καὶ τρέφεσθαι πέφυκε τοῦτ' ἐστὶν ἀρχή· τὸ δὲ ὕδωρ ἀρχὴ τῆς ὑγρᾶς φύσεως ἐστι κτλ. The argument would then be: (a) the seed and nurture of every thing are moist; (b) that from which things have their being and nurture is their principle; (c) water is the principle of moist things; (d) water is, therefore, the principle of all things.

(3) *συνεκτικὸν πάντων* (*Dox.*, p. 475, 8). The phrase is rightly suspect because *συνεκτικός* is a Stoic word (Diels, *ad loc.*). But *συνέχειν* is used with the same meaning by Aristotle and might easily have been changed in Theophrastus by Alexander or Simplicius. For moisture as the thing that gives shape to the dry, see Aristotle, *Meteorologica* 381 B 28 — 382 A 5; for moisture as the *συνέχον*, see *De Generatione* 334 B 31 — 335 A 3.

16. *Metaphysics* 983 B 27 — 984 A 3.

Aristotle will not vouch for this tradition, and he is doubtful even of Thales. The tradition referred to is a playful suggestion by Plato that Heraclitus and the other physicists derived their doctrine of flux from Homer (*Cratylus* 402 B, *Theaetetus* 152 E, 160 D, 180 C). That Aristotle can take Plato's humor so seriously prompts the question how much he may have been influenced by Plato to begin the history of philosophy with Thales. He assumes as self-evident that men's first interest was in the material source of things. He may have reasoned that, since the earliest of those who framed myths about the gods (983 B 29) identified this source as water, it was to be expected that the earliest philosophers (983 B 6-7) take this opinion as their starting-point. Aristotle's entire treatment of the early philosophers exhibits a tendency to make history conform to common sense.

In another fragment (*Scholiast to Apollonius Rhodius*, II, 1248 = *Dox.*, p. 475, n. 11), Theophrastus says that Prometheus was the first to share philosophy with men and that for this reason the myth arose that he shared fire with them. This fragment is probably from Theophrastus' *Περὶ Ἑρηνμάτων*. As Burnet (p. 40, n. 2) points out, it is "merely an application of Peripatetic literalism to a phrase of Plato's" (cf. *Philebus* 16 C and Protagoras 321 C).

17. *Metaphysics* 983 B 6-18.

18. *Metaphysics* 983 B 8-13. His expression here, τῆς μὲν οὐσίας ὑπομενούσης, τοῖς δὲ πάθει μεταβαλλούσης (983 B 9-10), makes certain his identification of the material principle with his substrate. This identification is evident throughout *Metaphysics* A in his references to matter as τὸ ὑποκείμενον or ἡ ὑποκειμένη οὐσία (983 A 30, 983 B 16, 984 A 21-22, 985 B 10). Elsewhere he says more explicitly that those who generate all things from one principle must hold that generation is the qualitative change of the substrate (*De Generatione* 314 A 8-11, 314 B 1-4).

19. W. A. Heidel, "Qualitative Change in Pre-Socratic Philosophy," *A. G. Ph.*, XIX (1906), p. 337.

20. *Metaphysics* 984 A 3-5.

Simplicius says that Hippo seems to have been an atheist (*Dox.*, p. 475, 3). This is probably not from Theophrastus. Alexander (*Metaph.* p. 26, 21 ff.), com-

menting on *Metaphysics* 984 A 3-5, suggests that Aristotle may have rejected Hippo's doctrine because it was superficial or obscure, because of the paltriness of Hippo's mind rather than of his doctrine, or because he was an atheist. Simplicius and other commentators, apparently accepting Alexander's last suggestion as a fact, state dogmatically that Aristotle regards Hippo as an atheist, and they give as reasons that Hippo was a thorough materialist and made water the cause of all things. (Simplicius, *De An.*, p. 32, 17 ff; Philoponus, *De An.*, p. 88, 23 ff; Brandis, *Scholia in Aristotelem*, p. 534 A 4-26). That Hippo was a materialist and an atheist seems to have been common knowledge; it is reported that Cratinus attacked him for impiety and lampooned him in the same way as Aristophanes lampooned Socrates (*Vors.*, I, p. 385, 9-16). That these are the reasons for Aristotle's contemptuous treatment of Hippo is very doubtful, for they would apply equally well to several other Presocratics who are not so treated. If Alexander could have appealed to the authority of Theophrastus on the matter, he would probably have done so. His reference to Hippo's atheism seems to be based merely on Hippo's traditional reputation. Simplicius in excerpting the fragments of the *Physical Opinions* from Alexander has, it seems, unwittingly included this comment as if it were from Theophrastus.

21. *Metaphysics* 983 B 22, 984 A 2-3.

22. *De Anima* 405 B 1-3: τῶν δὲ φορτικωτέρων καὶ ὕδωρ τινὲς ἀπεφάναντο, καθάπερ Ἰππων. πεισθῆναι δ' ἐόικασιν ἐκ τῆς γονῆς, ὅτι πάντων ὑγρὰ.

23. Anonymi Londenensis, *Iatrica*, XI, 22-28 (= *Vors.*, I, p. 386, 23-26).

24. Burnet, pp. 48-49.

25. *De Caelo* 294 A 29-30; *De Anima* 405 A 19-20, 411 A 8; *Metaphysics* 983 B 22, 984 A 2; *Politics* 1259 A 18-19.

26. *Dox.*, p. 475, 13-14. Diels (*ad loc.*) treats this sentence as a comment of Simplicius and not as part of the Theophrastus fragment. But, as will be seen, it is the practice of Theophrastus to quote from the Presocratic writings in support of his interpretations. It is not unlikely that, when no such writings are available, he should comment on this fact, particularly in the case of such an important figure as Thales.

HERACLITUS AND HIPPASUS

27. *Metaphysics* 984 A 7-8.

28. *Physical Opinions*, frag. 1 (= *Dox.*, pp. 475, 14 — 476, 2 = Simplicius, *Phys.*, pp. 23, 33 — 24, 6).

The account quoted by Simplicius closes with the statement that Heraclitus set a certain order and limited time for the change of the world in accordance with a fated necessity. (*Dox.*, p. 476, 1-2.) This is not evidence that Theophrastus attributes a periodic conflagration to Heraclitus. The language here shows the influence of Stoic interpretation. The word used for fate is *εἰμαρμένη*, which is a technical Stoic word. Heraclitus would probably use *χρησμοσύνη* or *χρεών* (see Heraclitus, frag. 65 and Heidel, *A.G.Ph.*, XIX [1906], p. 351, n. 46), which Theophrastus correctly interpreted as a reference to the order in the continuous generation and destruction of things (cf. Heraclitus, frag. 30). Later writers take this to mean that there is a periodic general destruction of the universe (Diogenes Laertius, IX, 7-8); but Theophrastus no more ascribes this notion to Heraclitus than he does to Anaximander, in whom he apparently also

finds the same concept of ordered change (cf. *Dox.*, p. 476, 10-11 and note 57). He is concerned with fire not in its purely cosmological aspects but in its function as the material cause of all generation and destruction. (On the supposed evidence of Aristotle for the periodic conflagration, see Cherniss, p. 29, n. 108).

29. See note 18.

30. *Physics* 187 A 12-16 (here Anaximander is excepted). See also *Physics* 189 B 5-10.

31. Fire is called the φύσις ὑποκειμένη (*Dox.*, p. 475, 17-18). See note 18.

32. Heraclitus, frags. 30, 76, 90, 126. Cf. Cherniss, pp. 380-382.

33. *Dox.*, p. 475, 15-18.

34. Frag. 90.

35. Zeller, I, p. 819.

36. *De Caelo* 303 B 13-17.

37. *De Caelo* 304 A 18-21.

38. The figure καθάπερ γὰρ ἐκ τῶν ψηγμάτων λεγομένων τὸν χρυσὸν συνεστάναι is used in Diogenes Laertius, II, 8 for the process of production by aggregation in the theory of Anaxagoras. In Diodorus Siculus, II, 50 gold prepared in the usual way from ore in mines is called ἐκ ψηγμάτων καθεψόμενος. Aristotle probably had this process of smelting in mind and may have taken the figure from the writings of Heraclitus.

39. *De Generatione* 323 B 3-12; Democritus alone is excepted.

40. *De Sensibus*, 1-2.

41. *De Anima* 405 A 25-28.

42. Diogenes Laertius, VIII, 84.

43. Clement, *Protr.*, 5, 64.

44. Aetius, IV, 3, 4.

45. Diogenes Laertius, VIII, 84; Aetius, I, 5, 5.

ANAXIMANDER

46. *Physical Opinions*, frag. 2 (= *Dox.*, p. 476, 3-11 = Simplicius, *Phys.*, p. 24, 13-21).

Theophrastus also says, 'Αναξίμανδρος ἀρχὴν τε καὶ στοιχεῖον εἶρηκε τῶν ὄντων τὸ ἄπειρον, πρῶτος τοῦτο τοῦνομα κομίσας τῆς ἀρχῆς. Two main interpretations have been given of this: that, according to Theophrastus, Anaximander introduced the name ἄπειρον of the material cause (Burnet, p. 54, n. 2); and that Anaximander introduced the term ἀρχή and Theophrastus has added στοιχεῖον to define this term in Peripatetic phraseology (W. Heidel, *C.P.*, VII [1912], pp. 215-216 and W. Jaeger, *The Theology of the Early Greek Philosophers*, pp. 24-28). Other ancient evidence is inconclusive:

(a) Hippolytus, *Refut.*, I, 6, 2: οὗτος μὲν οὖν (Anaximander) ἀρχὴν καὶ στοιχεῖον εἶρηκε τῶν ὄντων τὸ ἄπειρον, πρῶτος τοῦνομα καλέσας τῆς ἀρχῆς. It has been argued that τῆς ἀρχῆς here is against the first view, since τὴν ἀρχὴν is required with καλέσας (Jaeger, *op. cit.* p. 201, n. 27). This objection holds only if it be supposed that Theophrastus originally wrote καλέσας rather than the κομίσας preserved by Simplicius. If he did not, the question is not what Theophrastus meant but only what Hippolytus, or some intermediate writer, thought he meant. In fact, if

Theophrastus wrote *κομίσας*, the *τῆς ἀρχῆς* in Simplicius is just as embarrassing to the second view; for there *τὴν ἀρχήν* is expected in apposition to *τοῦνομα*.

(b) Simplicius, *Phys.*, p. 150, 23: *πρῶτος αὐτὸς* (Anaximander) *ἀρχὴν ὀνομάσας τὸ ὑποκείμενον*. This seems to support the second view. Burnet's translation, "being the first to name the substratum of the opposites as the material cause," not only does not render the Greek (Jaeger, *op. cit.* p. 201, n. 28); it makes no sense, since Simplicius has already treated the water of Thales as a material substratum of the opposites (*Phys.*, p. 149, 5-7 and p. 150, 11-12). If, however, Simplicius means that Anaximander was the first to call the substratum by the name *ἀρχή*, his remark is not much to the point. He is commenting on Aristotle's division of doctrines into those that explained generation by a single material principle and the opposites and those that explained it not by alteration but by a separation of the opposites from the material principle. Of this latter doctrine he says: *ἐνούσας γὰρ τὰς ἐναντιότητας ἐν τῷ ὑποκειμένῳ, ἀπειρῶ ὄντι σώματι, ἐκκρίνεσθαι φησιν Ἀναξίμανδρος, πρῶτος αὐτὸς ἀρχὴν ὀνομάσας τὸ ὑποκείμενον* (*Phys.*, p. 150, 22-24). Anaximander is the first philosopher named by Aristotle as holding this doctrine, and it is the fundamental difference between his material principle and those of the other Ionians that interests Simplicius. If the invention of any term is appropriate to the discussion, it is the invention of the Infinite. (The suggestion is offered that where the manuscripts read *αὐτὸς* Simplicius may have written *οὕτως*: "first by this name (Infinite) calling the substrate a principle.")

(c) Simplicius, *De Caelo*, p. 615, 15: *ἄπειρον δὲ πρῶτος* (Anaximander) *ὑπέθετο*. This clearly supports the first view.

If any solution is to be reached it can only be on the basis of what seems probable from the general point of view observed in the other fragments of the *Physical Opinions*. The other fragments reveal no interest in the invention of Peripatetic phraseology. Theophrastus is interested in the nature and function of Presocratic causes; for the most part he speaks as if the Presocratics already used later terminology (e.g., *στοιχεῖα* in Empedocles [*Dox.*, p. 478, 1-2]), and it is only when the name of a cause is peculiar to a philosopher or the function of it is not self-evident that he makes a point of the name employed by his predecessor (*Dox.*, p. 478, 4; 479, 8; 485, 2). The question he asks is how the theory of each philosopher differed from that of his predecessors. Each of the earlier philosophers under each heading is the first to hold that doctrine. This is implied when it is not explicitly stated. Thus, Anaxagoras is said to be the first to add the "missing cause" and Parmenides is the first to say that the world is spheroid (*Dox.*, p. 478, 19 f.; 482, 17); but it is understood that Thales is the first to make his principle water and Anaximenes, air. In the sentence following the one in question, Theophrastus makes it clearer what Anaximander was first to do: *λέγει δὲ αὐτὴν* (i.e., *τὴν ἀρχήν*) *μήτε ὕδωρ μήτε ἄλλο τι τῶν καλουμένων εἶναι στοιχείων, ἀλλ' ἐτέραν τινὰ φύσιν ἄπειρον* (*Dox.*, p. 476, 6-7). Anaximander was the first to make his principle the *ἄπειρον*, signifying by this name some infinite body other than the elements.

Finally, the suggestion that Theophrastus added *στοιχεῖον* to define Anaximander's term *ἀρχή* is answered by Heidel's admission (*loc. cit.*) that such collocations as *ἀρχὴ καὶ στοιχεῖον* are common in Aristotle (see Bonitz, *Index Aristotelicus*, p. 702 a 26 ff.). One instance is found in a passage of the *Metaphysics* that has already been shown to have influenced Theophrastus: *ἐξ οὗ γὰρ ἔστιν ἅπαντα τὰ ὄντα τοῦτο στοιχεῖον καὶ ταύτην ἀρχήν φασιν εἶναι τῶν*

δντων (983 B 8-11). If it is to be maintained that Anaximander used the term ἀρχή and that Theophrastus defined it by στοιχεῖον, there is just as good reason to say that τῶν πρώτων φιλοσοφούντων οἱ πλείστοι, of whom Aristotle is here speaking, used the term στοιχεῖον and Aristotle added ἀρχή to define it.

47. *Physics* 204 B 22-29, 187 A 20-26.

48. Diels ("Anaximandros von Milet," *N.Jbb.*, XXVI [1923] p. 69) says: "Ein Unrecht, eine ἀδικίη ist es, wenn das Individuum sich aus dem unendlichen Ganzen loslöst. Diesen Frevelmut zahlt es mit dem Tode, die Geburt des einen ist mit dem Tode des anderen verknüpft." (Cf. R. Mondolfo, *Problemi del pensiero antico*, chapter II.) But, as Heidel (*loc. cit.*, p. 234) remarks of this view, "That were in truth justice with a vengeance." The fact that reparation is made "to one another" (ἀλλήλοις, *Dox.*, p. 476, 10) is conclusive evidence against Diels. G. Vlastos ("Equality and Justice in the Early Greek Cosmologies," *C.P.*, XLII [1947], p. 169-172) recognizes the difficulty of Diels's position, but his attempt to cope with this difficulty is unsuccessful. He argues that it is the opposites that commit injustice against one another and that their penalty is reabsorption or blending into the Infinite. This reabsorption, he believes, does not really involve destruction; it is "only a process which insures full reparation among the opposites themselves." But the text of Theophrastus does not speak of the generation and destruction of the opposites. It speaks of the generation and destruction of things (τοῖς οὖσι, *Dox.*, p. 476, 9); and—if any proof be needed that "things" include more than the opposites—the preceding sentence of the text refers explicitly to the generation of the heavens and worlds from the principle (*Dox.*, p. 476, 7-8). Certainly it will not be proposed that the heavens and the worlds retain their identity after dissolution into the Infinite; and, since no distinction is made between different kinds of things, presumably all kinds of things suffer the same sort of destruction as the heavens and worlds do. H. Fränkel (*Dichtung und Philosophie des Frühen Griechentums*, p. 345-347) sees rightly that the things generated and destroyed are all things that exist, and he is of the opinion that the sin of a thing is that it seizes on the potentialities of other things that might have come into being in its place. This theory saves the facts of the text but reads more into the text than is there.

49. Xenophanes, frag. 27.

50. Heidel, *loc. cit.*

51. *Metaphysics* 983 B 6-11. N.B. 983 B 8-9: ἐξ οὗ γίγνεται πρῶτον καὶ εἰς δ φθίρεται τελευταῖον. For similar formulations cf. *Physics* 204 B 33-34; *De Generatione* 325 B 18-19; *Metaphysics* 1000 B 25-26, 1066 B 37; *Nicomachean Ethics* 1173 B 5-6.

52. *Dox.*, p. 475, 16-17. Cf. Aetius, I, 3,1; I, 3,3; I, 3,4; I, 3,11.

53. Aetius, I, 3,3.

54. This should not need saying, since these parallels were noted long ago by Diels (*Dox.*, p. 179). Like many later interpreters, Diels failed to see fully the significance of the parallels for the fragment of Anaximander.

55. Aristotle not only assumes that the early philosophers in general employed the principle of circular change; he uses this principle to refute their theories. One of his arguments against Anaximander is that this principle disproves the existence of an infinite body apart from the elements (*Physics* 204 B 29—205 A 1). He does not say that Anaximander recognized this principle but neglected

its consequences; the implication is, rather, that if Anaximander had employed the principle of circular change, he could not have set up his Infinite in the first place.

56. It can hardly have escaped either Aristotle or the Presocratics that, if the stock of primitive matter is infinite, circular change is unnecessary. It is necessary only if matter is finite, as it is in the system of Aristotle; for, if change is not circular, matter must eventually be exhausted. According to Aetius (I, 3, 3), whose testimony on this point is evidently derived from Aristotle (*Physics* 203 B 18–20) through Theophrastus, it was in order to prevent the exhaustion of matter that Anaximander made his principle infinite. In this case, Anaximander did not argue the existence of the infinite material principle from the fact of circular change, as Aristotle would hold in the *Metaphysics*; and whatever he said about circular change was probably limited to change between things already differentiated from the Infinite. Cf. W. Kraus, "Das Wesen des Unendlichen des Anaximander," *Rh. M.*, XCIII (1950), pp. 371 f.

57. The immediate passage containing the fragment of Anaximander reads: *ἐξ ὧν δὲ ἡ γένεσις ἐστι τοῖς οὐσι, καὶ τὴν φθορὰν εἰς ταῦτα γίνεσθαι κατὰ τὸ χρεών, διδόναι γὰρ αὐτὰ δίκην καὶ τίσιν ἀλλήλοις τῆς ἀδικίας κατὰ τὴν τοῦ χρόνου τάξιν, ποιητικωτέροις οὕτως ὀνόμασιν αὐτὰ λέγων* (*Dox.*, p. 476, 8–11). Damage to the text has certainly accompanied or caused the confusion of the argument, and no certain reconstruction can be made. The following comments are offered on some details:

(1) *ἐξ ὧν δὲ γένεσις ἐστι τοῖς οὐσι καὶ τὴν φθορὰν εἰς ταῦτα γίνεσθαι*. Cherniss (*op. cit.*, pp. 376 f.) sees in the use of the plurals (*ὧν* and *ταῦτα*) evidence that Theophrastus knew that the Infinite was a multitude of bodies and not a single entity. Since, however, the clause is a generally applied formula of Aristotle and is probably not even a paraphrase of Anaximander's words, the plurals cannot have this significance. Probably they have no special significance at all. Aristotle sometimes uses the plural in such statements (*Metaphysics* 1000 B 25–26, *De Generatione* 325 B 18–19), and sometimes the singular (*Metaphysics* 983 B 8, *Nicomachean Ethics* 1173 B 5–6); and in two otherwise identical passages the manuscripts agree on the singular in one place (*Physics* 204 B 33–34), while in the other some manuscripts read the singular and others the plural (*Metaphysics* 1066 B 37, on which see Ross's critical apparatus). The fact that Aetius always expresses the formula in the singular is probable evidence that Theophrastus had done so, as Aristotle does at *Metaphysics* 983 B 8. It will be noted, too, that immediately before the sentence in question Theophrastus uses the singular *ἐξ ἧς* of the Infinite (*Dox.*, p. 476, 7). This proves that, even if *ἐξ ὧν* is from Theophrastus, he does not consistently regard the Infinite as a plurality.

(2) a) *κατὰ τὸ χρεών*, b) *κατὰ τὴν τοῦ χρόνου τάξιν*. The first of these may be from Anaximander; the second has a Peripatetic flavor (cf. Aristotle, *Politics* 1261 A 34, *Meteorologica* 351 A 25–26; Theophrastus, *Metaphysics* 6 b 27–7 a 15). Dirlmeier ("Die Satz des Anaximandros von Milet," *Rh. M.*, LXXXVII [1938], pp. 380 f.) suggests that the second is Theophrastus' paraphrase of the first and that Theophrastus is interpreting Anaximander's reference to necessity as meaning that change is not chaotic but is governed by a temporal order. This suggestion is given weight by several other passages derived from Theophrastus: *Physical Opinions*, frag. 1 (*Dox.*, p. 476, 1–2): *ποιεῖ* (Heraclitus) *δὲ καὶ τάξιν*

τινὰ καὶ χρόνον ὠρισμένον τῆς τοῦ κόσμου μεταβολῆς κατὰ τινα εἰμαρμένην ἀνάγκην.
 Diogenes Laertius, IX, 7-8 (on Heraclitus): . . . πάντα δὲ γίνεσθαι καθ' εἰμαρμένην
 . . . (8) . . . γεννάσθαι τε αὐτὸν ἐκ πυρὸς καὶ πάλιν ἐκπυροῦσθαι κατὰ τινὰς περιόδους·
 ἐναλλάξ τὸν σύμπαντα αἰῶνα· τοῦτο δὲ γίνεσθαι καθ' εἰμαρμένην.

Diogenes Laertius, VIII, 84: ἔφη (Hippasus) δὲ χρόνον ὠρισμένον εἶναι τῆς τοῦ κόσμου μεταβολῆς.

Hippolytus, *Refut.*, I, 6, 1: οὗτος (Anaximander) ἀρχὴν ἔφη τῶν ὄντων φύσιν τινὰ τοῦ ἀπέλρου, ἐξ ἧς γίνεσθαι τοὺς οὐρανοὺς καὶ τὸν ἐν αὐτοῖς κόσμον . . . λέγει δὲ χρόνον ὡς ὠρισμένης τῆς γενέσεως καὶ τῆς οὐσίας καὶ τῆς φθορᾶς.

In all four passages, change is related to some sort of temporal order. In the first two passages the temporal order is linked to necessity or fate; and some reference to fate was probably also found in the source of the third, since Theophrastus seems to have treated the doctrines of Hippasus and Heraclitus as identical in most important details. Finally, the parallel should be noted between the fourth passage and the sentence in Theophrastus immediately before the passage under examination: ἐξ ἧς ἅπαντας γίνεσθαι τοὺς οὐρανοὺς καὶ τοὺς ἐν αὐτοῖς κόσμους (*Dox.*, p. 476, 7-8). No one of these pieces of evidence is conclusive, but taken together they allow a reasonable conjecture that necessity and the temporal order were linked in the original text of Theophrastus also and that they referred to the generation and destruction of the heavens and the worlds in them. Thus, Theophrastus may have written: ἐξ ἧς ἅπαντας . . . κόσμους κατὰ τὸ χρεῶν καὶ τὴν τοῦ χρόνου τάξιν οἱ ἐξ ὧν δὲ γενέσεις τοῖς οὐσι, καὶ τὴν φθορὰν εἰς ταῦτα γίνεσθαι κατὰ τὸ χρεῶν καὶ τὴν τοῦ χρόνου τάξιν. W. Jaeger (*Paideia*,² trans., p. 159), taking κατὰ τὴν τοῦ χρόνου τάξιν with the justice metaphor, translates τάξις as "ordinance," and he uses as evidence legal expressions like τάττειν δίκην. The passages noted above, particularly the first, make this interpretation improbable.

58. *Dox.*, p. 476, 11-14.

59. *Physics* 204 B 22-29.

60. Cherniss, p. 28.

61. Aristotle, *De Generatione* 314 A 8-11, 314 B 1-4.

62. *Dox.*, p. 476, 13-16. (Cf. Aristotle, *Physics* 187 A 26-31). This is the source of all later doxographical statements that attribute eternal motion to Anaximander. It is impossible to determine what firsthand evidence Theophrastus had for it. Probably he has merely drawn his own conclusion from some of Aristotle's general statements about early views of change. In the *Metaphysics* (984 A 27-29) Aristotle says that the early monists had not troubled to give a cause of motion, the implication being that motion simply exists, without a cause of its beginning or its end. Elsewhere he says that those physicists who posit a single principle declare it to be in motion (*Physics* 184 B 15-18), and that those who hold that there are infinite worlds, some coming into being and some perishing, declare that motion is eternal (*Physics* 250 B 15-20). But, again, he implies that Leucippus was the first to state that motion is eternal (*Metaphysics* 1071 B 26-33; cf. Cherniss, p. 173, n. 128).

63. *Dox.*, p. 479, 2 ff.

64. E.g., Zeller, I, pp. 279 ff. Zeller's reasoning is throughout strongly influenced by his predisposition to take the accounts of Aristotle and Theophrastus at their face value. A detailed refutation of his view is not necessary. The question

is settled by the correct interpretation of *ἐκείνος* (*Dox.*, p. 479, 4). Zeller (I, p. 280, n. 5) refers this to Anaxagoras (as do Diels [*ad loc.*] and Kranz [*Vors.*, II, 15, 24]); but, as Heidel points out (*C.P.*, VII [1912], p. 230, n. 3), *ἐκείνος* must be Anaximander. Not only does normal Greek usage require that this word refer to the former of the two names mentioned, i.e., Anaximander; but, unless *ἐκείνος* is Anaximander, the comparison with Anaxagoras breaks down; and the reference to Anaxagoras by name in the following sentence is not needed unless a change of subject is to be indicated. (If with Zeller we take *ἐκείνος* as Anaxagoras, the gist of the argument is: 1) Anaxagoras held the homoeomery theory; 2) and Theophrastus says that Anaxagoras' theory was like that of Anaximander; 3) for Anaxagoras held the homoeomery theory. Even if we allow this curious reasoning to stand, is it not still implied that Anaximander held the homoeomery theory?) Furthermore, there is no basis for Zeller's statement that, according to Theophrastus, the comparison with Anaximander is contingent on the assumption that Anaxagoras' material principle was unitary (*op. cit.*, p. 280). The relevant portion of the text reads: 'καὶ οὕτω μὲν οὖν' φησί (Theophrastus) 'λαμβάνόντων δόξειεν ἂν ποιεῖν τὰς μὲν ὑλικὰς ἀρχὰς ἀπείρους, ὥσπερ εἴρηται, τὴν δὲ τῆς κινήσεως καὶ τῆς γενέσεως αἰτίαν μίαν. εἰ δέ τις τὴν μῆξιν τῶν ἀπάντων ὑπολάβοι μίαν εἶναι φύσιν ἀόριστον καὶ κατ' εἶδος καὶ κατὰ μέγεθος, ὅπερ ἂν δόξειε βούλεσθαι λέγειν, συμβαίνει δύο τὰς ἀρχὰς αὐτὸν λέγειν τὴν τε τοῦ ἀπείρου φύσιν καὶ τὸν νοῦν, ὥστε πάντως φαίνεται τὰ σωματικὰ στοιχεῖα παραπλησίως ποιῶν 'Αναξιμάνδρῳ' (*Dox.*, p. 479, 9-16). Clearly, the last clause (ὥστε . . . 'Αναξιμάνδρῳ) is meant to go with both its own sentence and the preceding one; the meaning is that, whether Anaxagoras' material principle be regarded as plural or singular, it is similar to that of Anaximander.

65. Augustine, *Civitas Dei*, VIII, 2.

66. *Physics* 187 A 20-26. Here it is implied that the material principle of Anaximander was a mixture; it is expressly stated in a similar connection at *Metaphysics* 1069 B 20-22.

67. Cherniss, pp. 140-142.

68. W. A. Heidel, *A.G. Ph.*, XIX (1906), pp. 345 f.

69. Cherniss, p. 366.

70. *Physics* 187 A 20-23. Cf. 187 B 2-7.

71. *Dox.*, p. 479, 4-7.

ANAXIMENES AND DIOGENES

72. *Physical Opinions*, frag. 2 (= *Dox.*, pp. 476, 16 — 477, 5 = Simplicius, *Phys.*, pp. 24, 26 — 25, 1). Elsewhere Simplicius says ἐπὶ . . . τούτου μόνου (i.e., 'Αναξιμένειν) Θεόφραστος ἐν τῇ ἱστορίᾳ τὴν μάνωσιν εἴρηκε καὶ τὴν πύκνωσιν (*Dox.*, p. 477, n. 1 = *Phys.*, p. 149, 32 ff.). This sentence is strange because, on the authority of Theophrastus, Simplicius ascribes rarefaction and condensation to Hippasus, Heraclitus (*Dox.*, p. 475, 15-17) and Diogenes of Apollonia (*Dox.*, p. 477, 9). The suggestions that μόνου = πρώτου (Diels) and that πρώτου should be read for μόνου (Usener) are not convincing. If Theophrastus meant πρώτος there is no reason why he should have risked ambiguity by using μόνος with the meaning πρώτος; and that Simplicius understood him to mean μόνος is shown by Simplicius' next sentence, δῆλον δὲ ὡς καὶ οἱ ἄλλοι τῇ μανότητι καὶ πυκνότητι ἐχρῶντο (*Phys.*, p. 150, 1-2). It is possible, of course, that Simplicius

misunderstood Theophrastus or that Theophrastus simply contradicted himself (for similar contradictions see Theophrastus, *De Sensibus*, 38, and Stratton, *ad loc.*; Aristotle, *De Generatione* 323 B 10-11 and Cherniss, p. 91, n. 387). But if neither is the case, it is difficult to see how Theophrastus could have denied rarefaction and condensation to Diogenes. Probably, as Zeller suggests (I, p. 322, n. 1), Simplicius is thinking only of the earliest Ionians. Aristotle's assertion that all the monists employed rarefaction and condensation (*Physics* 187 A 12-16; cf. *De Caelo* 303 B 13-17) is only what he considers to be the consequence of a single material principle. Very probably neither he nor Theophrastus had any knowledge of how Thales accounted for change; both ascribe to Anaximander the mechanism of Anaxagoras; and the vagueness of Aristotle's reference to Heraclitus' mechanism of change suggests that he was not sure of Heraclitus' meaning. Theophrastus could attribute rarefaction-condensation to Heraclitus and the other monists on the grounds that this was the only mechanism of change possible in their systems. His statement regarding Anaximenes probably should not be taken to mean that he thinks no other Ionian employed rarefaction-condensation but that Anaximenes was the only one who did so explicitly (cf. *Dox.*, p. 493, 5: *μόνος ἢ μάλιστα*).

73. *Metaphysics* 984 A 5-7.

74. See notes 9, 30, and 62.

75. Theophrastus calls air *ἡ ὑποκειμένη φύσις*. See note 18.

76. *De Generatione* 330 B 7-13.

77. Despite his interpretation of rarefaction and condensation as qualitative change, Aristotle, too, in one passage recognizes what must have been the general view of the Presocratics on this matter. He says that all affections have their source in condensation and rarefaction, that heavy and light, soft and hard, hot and cold, are considered to be forms of density and rarity, and that condensation and rarefaction are combination and separation, by which are caused the generation and destruction of substances (*Physics* 260 B 7-12).

78. Cicero (*Acad.*, II, 37, 118), who is dependent on Theophrastus, goes even farther than Theophrastus. He names the products of air as fire, water, and earth, and he says that other things are formed from these.

79. *Physical Opinions*, frag. 2 (= *Dox.*, p. 477, 5-11 = Simplicius, *Phys.*, p. 25, 1-7).

80. Diogenes, frags. 5 (*Vors.*, II, p. 61, 10-14), 7 and 8.

81. The detailed information given by Theophrastus on Diogenes' psychological theory (*De Sensibus*, 39-48) indicates firsthand knowledge of Diogenes' work. Simplicius (*Phys.*, p. 25, 7-8) says that Diogenes' writings were extant in his time. In preserved fragments Diogenes does not say that air is infinite. Theophrastus may have got this from Aristotle's assertion that all physicists regarded their principles as infinite (*Physics* 203 A 16-18). So too, the description of air as eternal may be from Aristotle's similar statement about the infinite principles of the physicists (*Physics* 203 B 13-15).

82. Frag. 6 (*Vors.*, II, p. 65, 13-14).

83. Frag. 5 (esp. *Vors.*, II, p. 61, 11-14 and p. 62, 3-5).

84. *Metaphysics* 984 A 16-29.

85. *Metaphysics* 984 B 11-14.

86. Frags. 3, 4, and 5 (Vors., II, p. 61, 4-8).

87. *Dox.*, p. 477, 5-8. Neither Aristotle nor Theophrastus enumerates Diogenes' borrowings from these philosophers. On this see Zeller, I, pp. 354 ff. Theophrastus says that Diogenes was almost the last of the physicists.

EMPEDOCLES

88. *Physical Opinions*, frag. 3 (= *Dox.*, pp. 477, 16 — 478, 15 = Simplicius, *Phys.*, pp. 25, 19 — 26, 4). Theophrastus says that Empedocles was born not long after Anaxagoras and was the admirer and follower of Parmenides (*Dox.*, p. 477, 17-18. See note 90).

89. *Dox.*, p. 478, 8-10 (Empedocles, frag. 17, 7-8).

90. *Metaphysics* 984 A 8-11; 985 A 21-33.

Aristotle remarks that Anaxagoras was prior to Empedocles in age but later in works (*Metaphysics* 984 A 11-13). He is apparently attempting to justify his treatment of Empedocles before Anaxagoras by showing that in the real sense Empedocles was prior to Anaxagoras just as his four material principles are a logical step between the single principle of the Ionians and the infinite principles of Anaxagoras. Since Aristotle is prone to identify chronological and logical order, the fact that he considers such a remark necessary may indicate that it was generally known that Anaxagoras was born earlier than Empedocles. Theophrastus may have had good reason for adding that the difference in ages was not great; but it is at least equally possible that he has merely drawn his own conclusion from Aristotle's remark (cf. Ross *ad Metaphysics* 984 A 12; Cherniss, p. 219, n. 5; and C. E. Millerd, *On the Interpretation of Empedocles*, p. 13). Simplicius says that Empedocles was Παρμενίδου . . . ζηλωτῆς καὶ πλησιαστῆς καὶ ἔτι μᾶλλον τῶν Πυθαγορείων (*Dox.*, p. 477, 18). Of Empedocles' relationship to the Pythagoreans, Diels (*ad loc.*) rightly says, "narratio de Pythagoreorum disciplina aut aliena est a Theophrasto aut certe immutata redditur a Simplicio." Diogenes Laertius (VIII, 55) states: ὁ δὲ Θεόφραστος Παρμενίδου φησὶ ζηλωτὴν αὐτὸν γενέσθαι καὶ μιμητὴν ἐν τοῖς ποιήμασι· καὶ γὰρ ἐκέλευον ἐν ἔπεσι τὸν περὶ φύσεως ἐξενεγκεῖν λόγον. The indebtedness of Empedocles to Parmenides is evident not only in his mode of expression but also in his doctrine. But the use of *πλησιαστής* by Simplicius — unless, of course, this was written by Simplicius for an original *μιμητής* preserved by Diogenes Laertius — seems to imply a closer relationship, that of student to teacher. In view of the relationships that Theophrastus attempts to establish between Anaximander and Xenophanes and between Xenophanes and Parmenides, it seems not unlikely that he believes a similar relationship to have existed between Parmenides and Empedocles — and for similar reasons (see page 119). Just as Aristotle represents the Eleatic doctrine as a development from the Ionian monism but does not suggest a teacher-student relationship between the two schools, so, too, by way of preface to his discussion of Empedocles' theory of efficient causality, he remarks that Parmenides had given Love an important place in his cosmogony (*Metaphysics* 984 B 23-31; cf. Cherniss, page 222), but he does not even hint that Empedocles was Parmenides' disciple.

91. *Dox.*, p. 478, 4-7. Cf. Empedocles, frag. 17, 6: καὶ ταύτ' ἀλλάσσοντα διαμπερὲς οὐδαμὰ λήγει.

92. *Metaphysics* 984 A 27 ff.

93. *Dox.*, p. 478, 3.
94. Empedocles, frags. 17, 30-35; 21, 13-14. Cf. C. E. Millerd, *op. cit.*, pp. 34 ff., and W. A. Heidel, *A.G.Ph.*, XIX (1906), p. 365 f.
95. Millerd, *op. cit.*, p. 38.
96. *Dox.*, p. 478, 6-15.
97. Empedocles, frag. 17, 17-20.
98. E.g., by Burnet, p. 232.
99. Empedocles, frag. 17, 21 and 25-26.
100. E.g., Empedocles, frags. 71 and 96.
101. *De Generatione* 314 A 16-17.
102. *Metaphysics* 1091 B 11-12.
103. *Metaphysics* 1075 B 3-4. Cf. Cherniss, p. 108, n. 444.
104. Empedocles, frags. 35 and 36.
105. Empedocles, frag. 17, 32-33.
106. Empedocles, frags. 35, 9-11; 17, 22-24.
107. Aristotle speaks of Empedocles' elements as τὰ ὡς ἐν ὕλης εἶδει λεγόμενα στοιχεῖα, meaning by this that they do not accord exactly with his own concept of matter (*Metaphysics* 985 A 32; cf. Cherniss, p. 308, n. 67).
108. *Metaphysics* 985 A 21-23. The inadequacy he has in mind is Empedocles' failure to appreciate the full significance of his principles for the Peripatetics (see, e.g., *Metaphysics* 984 B 32 — 985 A 10, 1000 A 24 ff.; cf. Cherniss, pp. 230-234).
109. *De Generatione* 315 A 3-25.
110. *De Generatione* 314 A 11-13; cf. Cherniss, pp. 106 ff.
111. *Physics* 187 A 20-26; cf. Cherniss, pp. 50-51.
112. *De Generatione* 325 B 15-25; cf. Cherniss, p. 96.
113. *Metaphysics* 984 B 32 — 985 A 10. Cf. *Metaphysics* 993 A 17-18, where Aristotle finds even the formal cause in Empedocles.
114. *Metaphysics* 1004 B 29-34; cf. Cherniss, pp. 47-48.
115. *De Caelo* 301 A 13-20; cf. Cherniss, pp. 194-196.
116. *De Sensibus*, 20 (*Dox.*, p. 505, 10-11).

ANAXAGORAS AND ARCHELAUS

117. *Physical Opinions*, frag. 4 (= *Dox.*, pp. 478, 16 — 479, 16 = Simplicius, *Phys.*, pp. 26, 31 — 27, 23).

The account as given by Simplicius is repetitious and inconsistent. Certainly only part of it is an actual quotation from Theophrastus. About this part there can be no doubt, since Simplicius repeats it elsewhere in the same form under Theophrastus' name (*Dox.*, p. 479, 9-16; cf. Simplicius, *Phys.*, p. 154, 16-23). The rest, if not a quotation, is at least an accurate paraphrase, since it is paralleled by doxographers who have derived material from the *Physical Opinions* by other lines of transmission (*Dox.*, pp. 478, 18 — 479, 5. Cf. *Vors.*, II, pp. 19, 34 — 20, 8; 20, 13; 20, 37-38; 47, 9-14).

Anaxagoras is said by Theophrastus to have shared the philosophy of Anax-

imenes (*Dox.*, p. 478, 18–19). The doxographers say that Anaxagoras was the student of Anaximenes (*Vors.*, II, pp. 5, 4–5; 8, 3–4; 8, 36–37; 8, 42–43; 19, 40–41). Anaximenes was probably dead before Anaxagoras was born (Burnet, p. 253). Aristotle connects the doctrine of Anaxagoras with that of Anaximander (*Physics* 187 A 20–26), and Theophrastus follows him in this (*Dox.*, p. 479, 3–16). Theophrastus apparently thinks that the two philosophers were connected by more than the similarity of their doctrines, and he has attempted to fit them into a scheme of teacher-student relationship. Philosophy begins with Thales; Anaximander is the student of Thales (*Dox.*, p. 476, 3–4); after Anaximander, philosophy divides and one of his students, Xenophanes (*Dox.*, p. 482, 14–15), becomes the first of the Eleatics, while the other, Anaximenes (*Dox.*, p. 476, 16–17), continues the tradition of the physicists; Anaximenes, in turn, is followed by Anaxagoras.

118. Anaxagoras, frags. 11 and 12 (*Vors.*, II, p. 37, 22–23 and p. 39, 6–7).

119. E.g., frags. 12 (*Vors.*, II, p. 38, 5–6 and 10–12) and 13.

120. *Dox.*, p. 482, 13.

121. *Metaphysics* 984 B 1–18, 20–22.

Elsewhere Aristotle considers *Nous* not only as efficient and final (*Metaphysics* 988 A 14–17, 988 A 33–34, 988 B 6–11, 1075 B 8–10; *Physics* 265 B 22–23) but also as formal (*Metaphysics* 989 B 16–19) and as equivalent to his unmoved mover (*Physics* 256 B 24–27. Cf. Cherniss, p. 172, note 122).

122. *Metaphysics* 984 B 18–20.

123. *Metaphysics* 984 B 23 — 985 A 10.

124. *Metaphysics* 984 B 31–32.

125. *Dox.*, p. 478, 21–23; cf. Anaxagoras, frags. 1 and 17.

126. *Metaphysics* 984 A 13–16.

127. Anaxagoras, frag. 4 (*Vors.*, II, p. 34, 6–7); *Dox.*, p. 478, 21; Aristotle, *Metaphysics* 984 A 14 (on which see Ross's note).

Aristotle is careful to say *σχεδόν . . . ἅπαντα τὰ ὁμοιομερῆ*, meaning by this, apparently, that there is only a rough correspondence between his homoeomeries and the principles of Anaxagoras.

128. Burnet (pp. 262 ff.) holds, with Tannery, that the seeds contain portions of the "traditional opposites" and that, according to Aristotle, the opposites have as much right to be called first principles as the homoeomeries have. This view, while seeming in part to be substantiated by the passages of Aristotle and Theophrastus referred to above, is based on a misinterpretation of *Physics* 187 A 25 (see note 136). With regard to the fragments of Anaxagoras, it has been refuted in detail by C. Bailey (*The Greek Atomists and Epicurus*, pp. 538–542).

129. In extant fragments Anaxagoras speaks of *αἰθήρ* (frag. 2) but not of fire. Fire is Aristotle's interpretation. Cf. *De Caelo* 302 B 4–5.

130. *De Generatione* 314 A 18 — B 1; *De Caelo* 302 A 28 — B 3.

Aristotle says that Anaxagoras thought the elements to be compounds of flesh, bone, etc.; but Aristotle does not mean by this that there were no seeds of the elements. The difference between Anaxagoras and Empedocles was that Anaxagoras, by postulating an infinite variety of elementary bodies and asserting that everything contained portions of everything else, eliminated the possibility of such simple bodies as the four roots of Empedocles. Aristotle might merely have

said that, while the visible masses of the elements were pure and irreducible entities for Empedocles, Anaxagoras held that they contained portions of each other and of everything else. He makes the contrast sharper by the examples of Anaxagoras' seeds he chooses. Empedocles thought that bone and flesh were compounds of the elements. Anaxagoras would admit that a piece of bone contained seeds of the so-called elements, but he would add that it also contained seeds of gold and stone, etc., and that it was bone not because it contained seeds of the elements but because the seeds of bone in it predominated over the other seeds. In the same way he would maintain that what Empedocles called air contained seeds of bone, flesh, gold, stone, etc., but was air because of the predominance of the seeds of air.

131. *Dox.*, p. 478, 21.

132. *Metaphysics* 984 A 2-13.

133. *Dox.*, pp. 478, 23 — 479, 2.

134. *Physics* 187 B 1-7. See note 136.

135. *Dox.*, p. 479, 2-16.

136. *Physics* 187 A 20-26.

This passage has been frequently misunderstood. Aristotle says of Anaxagoras and Empedocles: τὸν μὲν (Anaxagoras) ἄπειρα τὰ τε ὁμοιομερῇ καὶ τάναντία, τὸν δὲ (Empedocles) τὰ καλούμενα στοιχεῖα (*Physics* 187 A 25-26). Burnet and others have translated τὰ τε ὁμοιομερῇ καὶ τάναντία as "both the homoeomeries and the contraries." This translation cannot be correct. The point of Aristotle's argument is that all the Presocratics made the contraries principles (*Physics* 188 A 19) and the context shows clearly that the contraries are the only products of Anaxagoras' mixture with which he is here concerned. In the phrase, τὰ τε ὁμοιομερῇ καὶ τάναντία, he is defining the homoeomeries by hendiadys. The purpose of the whole clause in which it stands is to distinguish Anaxagoras and Empedocles with regard to the number of their contrary principles; the homoeomeries (i.e. the contraries) of Anaxagoras are infinite, but the elements of the latter are finite in number. A few lines later Aristotle says that, according to Anaxagoras, nothing is purely and wholly white, black, sweet, flesh, or bone, but the nature of each thing is that of which it contains the most (*Physics* 187 B 4-7). This has been cited in support of the view that Aristotle believes that both the homoeomeries and the contraries are ingredients of particular things (G. Vlastos [Ph.R. LIX (1950) p. 52]). But this statement and the one quoted above are not to be taken together as part of a single interpretation. This statement is part of an entirely different argument which is not concerned with contrariety at all but is directed simply against the infinity of Anaxagoras' principles (*Physics* 187 A 26 — 188 A 18). For the purpose of this argument Aristotle temporarily shifts his point of view and leaves aside the question of contrariety as such. To be sure, he mentions the contraries white, black, and sweet, but these are not contraries in the sense that was used in *Physics* 187 A 12-26. They are not now principles of generation, but they are, along with flesh and bone, simply some of the infinite ingredients of the mixture.

137. *Metaphysics* 989 A 30 — B 6, B 16-21.

138. *Metaphysics* 989 A 30-33.

139. *Dox.*, pp. 478, 22-23; 479, 4-6.

140. *Dox.*, p. 478, 17. The form of Simplicius' statement may have been in-

fluenced by *Physics* 184 B 21-22, on which he is commenting. But this does not decrease the likelihood that Simplicius found a similar statement in Theophrastus. Aristotle does not explicitly identify the doctrine meant at *Physics* 184 B 21-22. Simplicius' identification probably comes from Theophrastus.

141. *Physics* 187 A 29-30. Cf. *De Generatione* 314 A 11-15, where Aristotle says that those who, like Anaxagoras, make the material principles more than one, must distinguish generation from alteration. He objects that Anaxagoras "failed to understand his own utterance" since he said that generation and destruction are the same as alteration.

142. In *De Sensibus*, 1-2 and 27 ff. Theophrastus attributes contrariety in sensation to Anaxagoras, apparently finding evidence of this in Anaxagoras' statement that all sensation is accompanied by pain (*ibid.*, 29). This, again, is Aristotelian interpretation. The notion that there is contrast in sensation was probably common among the early philosophers, but it had nothing to do with quantitative change (Cherniss, p. 305, n. 57).

143. *Physical Opinions*, frag. 4 (= *Dox.*, pp. 479, 17 — 480, 2 = Simplicius, *Phys.*, p. 27, 23-26).

Theophrastus reports that "they say" that Socrates associated with Archelaus, and the doxographers take this to mean that Socrates was the student of Archelaus (*Vors.*, II, pp. 44, 28; 45, 20 and 25-30; 46, 35). Theophrastus does not say what connection there was between the doctrines of the two men, but some connection is certainly intended. Plato, Xenophon, and Aristotle appear not to know that Socrates had any contact with Archelaus. Aristoxenus is alleged to have said that Socrates was Archelaus' lover as well as student (*Vors.*, II, p. 45, 30-32), and it has been thought that the whole story is a piece of scandal started by Aristoxenus. This theory is favored by the untrustworthiness of Aristoxenus' other references to Socrates, but it does not explain why Socrates is linked to Archelaus rather than to some other philosopher. If, on the other hand, Theophrastus' report is prior, it is easy to see how Aristoxenus could have turned the ambiguity of the word "associate" to his purpose.

In the *Phaedo* (96 A ff.) Socrates says that when he was young he had a desire for the investigation of nature but came to the conclusion that he had no capacity for this sort of inquiry. He heard "someone" read from the book of Anaxagoras (97 B-C), and he was delighted to learn of the theory that Mind is the cause of everything. On reading Anaxagoras' book, however, he found that Anaxagoras made no use of Mind but resorted to purely mechanistic explanations (98 B-C). In his disappointment he then abandoned the consideration of physical phenomena and took refuge in propositions (99 E). With this passage should be compared Aristotle, *Metaphysics* 987 A 32 — B 8. Aristotle says that when Plato was young he became familiar with the Heraclitean doctrine that all sensible things are in constant flux and are therefore unknowable. This doctrine, he says, Plato held to even in later years. Socrates, however, concerned himself with morals rather than with the physical world and sought universals in morals, and he fixed thought for the first time on definitions. Plato accepted this procedure and reasoned that, since sensibles are always changing, definition must be of non-sensibles, which he called Ideas. (Aristotle's *δρισμῶν*, *Metaphysics* 987 B 3, is apparently meant to render Plato's *λόγους*, *Phaedo* 99 E 5.)

These two passages have a very important feature in common. In both Socrates marks a turning point from purely physical speculation toward Plato's ideal

theory. For Aristotle this development ends in the discovery of his own formal cause. The position of Socrates with regard to the formal cause is, therefore, analogous to the position of the Eleatics with regard to the efficient cause. As the Eleatics pointed the way to the efficient cause by their realization that the Ionian monists could not account for change, so Socrates pointed the way to the formal cause by his dissatisfaction with purely physical explanations and his shifting of attention to definitions. Theophrastus makes Xenophanes the student of Anaximander in order to express more concretely the doctrinal connection that Aristotle suggests between the Eleatics and the Ionians (see pages 118 f.). So, too, in making Socrates the associate of Archelaus, he has apparently combined the accounts of Plato and Aristotle in such a way as to make explicit the relationship that Aristotle believes to have existed between the earlier materialism and the Platonic ideal theory.

If the unidentified "someone" whom Socrates heard reading in the *Phaedo* was Archelaus and if the incident in the *Phaedo* is a historical fact, the meeting of Socrates and Archelaus was a critical event in the history of causal theory. But, even if these conditions — both of which are doubtful — be granted, there is no evidence in the *Phaedo* that Socrates became the student of Archelaus. Theophrastus is impelled by the belief that philosophy is handed on from teacher to student, and he must therefore fill in the gap left by Aristotle. But in doing so he takes care to point out that he is only reporting what "they say"; and his word "associate," although probably intended to mean that Socrates was the student of Archelaus, is broad enough in sense that it may cover not only the formal discourse of teacher and student but also a casual meeting like that of the *Phaedo*.

(On the basis of Theophrastus' statement, Burnet [*ad Phaedo* 97 B 8] identifies the unnamed reader of the *Phaedo* as Archelaus, and he sees significance in the fact that, among the physical theories with which the youthful Socrates is said to have been acquainted, the first one mentioned is one that has been attributed to Archelaus by the doxographers [*ad Phaedo* 96 B 3]. But the doctrine is not referred to Archelaus, but to "some people"; and, even if the doctrine were solely the doctrine of Archelaus, it would not follow that Socrates had learned it from him. Furthermore, Socrates is interested in this doctrine *before* he has learned of Nous. Burnet must then suppose that, during his early study with Archelaus, Socrates learned only physical theory and was unaware of Archelaus' major debt to Anaxagoras.)

144. *Vors.*, II, pp. 46, 5; 47, 9-18; 47, 36-38.

145. *Vors.*, II, pp. 46, 4-5; 47, 9-13.

146. *Vors.*, II, pp. 46, 35 — 47, 2.

147. *Metaphysics* 987 A 2-9.

XENOPHANES

148. *Physical Opinions*, frag. 5 (= *Dox.*, pp. 480, 4 — 481, 13 = Simplicius, *Phys.*, pp. 22, 26 — 23, 20). According to some of the doxographers, the material principle of Xenophanes was earth (*Vors.*, I, p. 124, 11-19). Galen states that this doctrine was not attributed to Xenophanes by Theophrastus. He finds fault with Sabinus for saying that Xenophanes declared earth to be the substance of men. (*Physical Opinions*, frag. 5a [*Dox.*, pp. 481, 14 — 482, 4 = Galen, *In Hip-*

pocratis de Natura Hominis, XV 25K.] The censure is not justified for that was Xenophanes' theory (frags. 27, 29, 33). Galen and the doxographers mentioned seem to have confused the cosmological and biological doctrines found in Theophrastus.

149. The account of Xenophanes in this treatise has generally been discredited as a hodgepodge put together under the influence of Aristotle and Theophrastus by a late writer who had no knowledge of Xenophanes' poems and misunderstood the interpretation by which he was influenced (*Dox.*, pp. 108 ff.; Zeller, I, pp. 624 ff.). K. Reinhardt (*Parmenides*) suggested, on the contrary, that the treatise does represent Xenophanes' doctrine and that the obviously derivative nature of the treatise is due to Xenophanes' borrowing from Parmenides. This view has been conclusively answered by Jaeger, who points out that, if the treatise is based on Xenophanes' poems, Aristotle cannot have known the poems (*The Theology of the Early Greek Philosophers*, pp. 51-54).

150. Simplicius, *Phys.*, p. 22, 22-26: 'Ανάγκη τοίνυν τὴν ἀρχὴν ἢ μίαν εἶναι ἢ οὐ μίαν, ταῦτόν δὲ εἰπεῖν πλείους, καὶ εἰ μίαν, ἥτοι ἀκίνητον ἢ κινουμένην. καὶ εἰ ἀκίνητον ἥτοι ἄπειρον, ὡς Μέλισσος ὁ Σάμιος δοκεῖ λέγειν, ἢ πεπερασμένην, ὡς Παρμενίδης Πύρρτος Ἐλεάτης, οὐ περὶ φυσικοῦ στοιχείου λέγοντες οὗτοι, ἀλλὰ περὶ τοῦ ὄντος ὄντος. This immediately precedes *Physical Opinions*, frag. 5. It was omitted by Usener and by Diels in the *Doxographi Graeci*, although in *Fragmente der Vorsokratiker* Diels seems to have considered it part of the fragment (*Vors.*, I, p. 121, note on line 20). That it should be treated as part of the Theophrastus fragment is argued by the fact that it corresponds to Aristotle, *Metaphysics* 986 B 19-21, just as the following sentence, in which Theophrastus is named, corresponds to *Metaphysics* 986 B 21-24.

151. *Dox.*, p. 480, 4-8.

152. *Metaphysics*, 986 B 10-27.

153. W. D. Ross, *Aristotle's Metaphysics*, note on 986 B 22 and 23.

154. Zeller (I, p. 625, n. 3) attempts to rescue Theophrastus by maintaining that οὔτε πεπερασμένον οὔτε ἄπειρον . . . ὑποτίθεσθαι (*Dox.*, p. 480, 4-6) be translated: "X. aber setzt das Prinzip als Eines, d.h. die Gesamtheit des Seienden als Eines, und zwar weder als ein begrenztes noch als ein unbegrenztes, weder als ein bewegtes noch als ein unbewegtes." But the correct translation is the one that Zeller rejects: "er setzt das ὄν καὶ πᾶν als ein weder begrenztes noch unbegrenztes"; and so, clearly, Simplicius understands the sentence.

155. *Dox.*, p. 481, 9-12, and Diels's note on line 9.

156. [Aristotle], *De Melisso, Xenophane, Gorgia* 977 B 2-3, 8-10.

157. Diels (*Dox.*, p. 480, 4-5) prints οὔτε πεπερασμένον οὔτε ἄπειρον οὔτε κινούμενον οὔτε ἡρεμοῦν as if it were all the addition of Simplicius. Cf. K. Reinhardt, *Parmenides*, p. 92, n. 1.

158. Werner Jaeger expresses a similar view in his *Theology of the Early Greek Philosophers* (p. 214, n. 64), which appeared after this section had been drafted.

159. *Sophist* 242 D.

160. *Theaetetus* 179 E.

161. *Dox.*, p. 482, 14-15; cf. Aristotle, *Metaphysics* 984 A 27 — B 1.

162. Xenophanes, frag. 26.

- 163. *Dox.*, p. 481, 2-5; cf. *Dox.*, pp. 112-113.
- 164. Xenophanes, frags. 11, 12, 14-16.
- 165. Frag. 23.
- 166. Cherniss, p. 201, n. 228.
- 167. Frags. 24, 25.
- 168. Frags. 27, 29-33.
- 169. Burnet, p. 122.

PARMENIDES

170. On Parmenides, Simplicius' quotation from the *Physical Opinions* is limited to the statement that ἐν τοῖς πρὸς δόξαν Parmenides said that the principles are fire and earth (*Physical Opinions*, frag. 3 [*Dox.*, p. 477, 13-14 = Simplicius *Phys.* p. 25, 15-16]). More extensive fragments are contained in Alexander and Diogenes Laertius (*Physical Opinions*, frag. 6 [*Dox.*, p. 482, 5-13 = Alexander, *Metaph.*, p. 31, 7-14]; *Physical Opinions*, frag. 6a [*Dox.*, pp. 482, 14 — 483, 7 = Diogenes Laertius, IX, 21-22]).

All these sources say that Parmenides was the follower of Xenophanes (*Dox.*, p. 480, 5-6; p. 482, 7-8; p. 482, 14-15). Theophrastus has made history out of Aristotle's parenthetical remark that Parmenides was said to be the student of Xenophanes (*Metaphysics* 986 B 22. See page 119). (Suidas [*Vors.*, I, p. 218, 22 f.] says that, according to Theophrastus, Parmenides was the student of Anaximander. This error is due to a misunderstanding of the statement in Diogenes Laertius [*Dox.*, p. 482, 14-15]: Ξενοφάνους δὲ διήκουσε Παρμενίδης . . . (τοῦτον Θεόφραστος ἐν τῇ Ἐπιτομῇ Ἀναξιμάνδρου φησὶν ἀκοῦσαι). "τοῦτον" here must be Xenophanes and not Parmenides [*Dox.*, p. 103].)

171. *Dox.*, pp. 482, 8 and 10-14; 483, 3-4; 477, 13-14.

172. *Dox.*, pp. 482, 10-11; 483, 14-15.

173. *Dox.*, p. 483, 8-10.

174. *Dox.*, pp. 482, 11-13; 482, 18 — 483, 1 (where read αἰτία at p. 482, 20, with Diels, for αὐτόν); 477, 13-14. Cf. Theophrastus, *De Sensibus*, 3 (*Dox.*, p. 499, 13-16).

175. *Metaphysics* 984 A 27 — 984 B 8. Cf. Cherniss, p. 221, n. 18.

176. *Metaphysics* 986 B 14 — 987 A 2.

177. Aristotle, *Metaphysics* 986 B 10-14, 25-27 (so also *De Caelo* 298 B 15-20; *Physics* 184 B 26 — 185 A 1). Cf. *Dox.*, p. 480, 4-8 and Theophrastus *apud* Simplicius, *Phys.*, p. 20, 17-26.

178. Parmenides, frag. 8, 50-53.

179. Parmenides, frag. 8, 56-59. Simplicius (*Dox.*, 477, 14) says the principles were "fire and earth, or rather light and dark." The second interpretation is more nearly correct; but it is almost certainly Simplicius' own and is not from Theophrastus, since it does not appear in the excerpts of Alexander and Diogenes Laertius.

180. See Cherniss, p. 47, n. 187, and p. 48, n. 192.

181. Aristotle, *Metaphysics* 986 B 31 ff. says: ἀναγκαζόμενος δ' ἀκολουθεῖν τοῖς φαινόμενοις, καὶ τὸ ἐν μὲν κατὰ τὸν λόγον, πλείω δὲ κατὰ τὴν αἴσθησιν ὑπολαμβάνων

εἶναι, δύο τὰς αἰτίας καὶ δύο τὰς ἀρχὰς πάλιν τίθησιν, θερμὸν καὶ ψυχρόν, οἶον πῦρ καὶ γῆν λέγων. In all three versions of Theophrastus' account, the two parts of Parmenides' poem are distinguished as being *κατ' ἀλήθειαν* and *κατὰ δόξαν*. Alexander, who is probably giving a *verbatim* quotation from Theophrastus, says Parmenides made the principles two "for the purpose of explaining the genesis of phenomena according to the opinion of most people." (Alexander, *Metaph.*, p. 31, 11-14 [*Dox.*, p. 482, 10-13]: *κατ' ἀλήθειαν μὲν ἐν τὸ πᾶν . . . κατὰ δόξαν δὲ τῶν πολλῶν εἰς τὸ γένεσιν ἀποδοῦναι τῶν φαινομένων δύο ποιῶν τὰς ἀρχάς, πῦρ καὶ γῆν*. Simplicius, *Phys.*, p. 25, 16 [*Dox.*, p. 477, 13-14]: *ἐν τοῖς πρὸς δόξαν πῦρ καὶ γῆν*. Diogenes Laertius, IX, 22 [*Dox.*, p. 483, 3-4]: *δισσήν τ' ἔφη εἶναι τὴν φιλοσοφίαν τὴν μὲν κατ' ἀλήθειαν τὴν δὲ κατὰ δόξαν*.)

182. *De Sensibus*, 3.

183. *Metaphysics* 984 B 5-8. The reference is chiefly to Parmenides. (Cf. Cherniss, p. 221, n. 18.)

184. *Metaphysics* 986 B 33 — 987 A 2; *De Generatione* 318 B 3-7.

185. *Metaphysics* 984 B 23-31.

186. N.B. his designation of it as motionless and spherical (*Dox.*, p. 483, 14 and p. 482, 11). In the comparison he makes between the Eleatics and Leucippus the implied basis of the comparison must be that for both schools being was material (*Dox.*, p. 483, 14-17).

187. *Metaphysics* 984 A 27 ff.

188. *De Caelo* 298 B 21-22. Cf. *Physics* 207 A 15 ff., where it is clear that he treats the One of both Melissus and Parmenides as material.

189. *Metaphysics* 986 B 18-21.

190. See Cherniss, p. 23, n. 85.

191. E.g. Parmenides, frag. 8, 22 ff.

THE ATOMISTS

192. *Physical Opinions*, frag. 8 (= *Dox.*, pp. 483, 11 — 484, 11 = Simplicius, *Phys.*, p. 28, 4-24).

193. *Dox.*, p. 484, 1-5. That these lines are a digression is shown by the sentence that follows them: *πεφυκεῖναι γὰρ τὸ ὅμοιον ὑπὸ τοῦ ὁμοίου κινεῖσθαι κτλ.* (*Dox.*, p. 484, 5 ff.) This sentence does not refer to the differences of the atoms or to the generation of things by them but to the movement of the atoms in the void, which Theophrastus has been discussing prior to the digression (*Dox.*, p. 483, 22).

194. *Metaphysics* 985 B 4-17. Cf. *Dox.*, p. 484, 1-5. (Commenting on the relationship of these passages Diels [*ad Dox.*, p. 484, 1] says, "contra de ceteris ὡς γὰρ ὕλην κτλ. [*Dox.*, p. 484, 3-5] accurate Aristoteli respondentibus nihil affirmo." A comparison of the two passages will show that Diels was unnecessarily cautious.)

195. *Metaphysics* 985 B 8-10. Cf. *Dox.*, p. 483, 19-21. Aristotle says that the full and the void are causes *τῶν ὄντων* (985 B 9); Theophrastus says, more accurately, *τοῖς γιγνομένοις* (*Dox.*, p. 483, 20) but again, probably influenced by Aristotle's sentence, he uses *τοῖς οὐσι* (*Dox.*, p. 484, 3). Aristotle refers to the full as *πλήρες καὶ στερεόν* (985 B 7); Theophrastus, *ναστήν καὶ πλήρη* (*Dox.*,

p. 483, 21). *ναστός* is probably a technical term found by Theophrastus in atomistic writings. It does not occur in the *Metaphysics*, but is used in a passage quoted by Simplicius from Aristotle's *Περὶ Δημοκρίτου* = frag. 208 (Rose, Teubner edition, p. 166, 5).

196. *Metaphysics* 985 B 10-13: καὶ καθάπερ οἱ ἐν ποιοῦντες τὴν ὑποκειμένην οὐσίαν τὰλλα τοῖς πάθεσιν αὐτῆς γεννῶσι, τὸ μακρὸν καὶ τὸ πυκνὸν ἀρχὰς τιθέμενοι τῶν παθημάτων, τὸν αὐτὸν τρόπον καὶ οὗτοι τὰς διαφορὰς αἰτίας τῶν ἄλλων εἶναι φασιν. Aristotle does not say what the analogue of τὴν ὑποκειμένην οὐσίαν is in the atomistic theory. The corresponding sentence in Theophrastus is an explication of what is implicit in Aristotle's sentence: ὡς (γὰρ) ὕλην τὰς ἀτόμους ὑποτιθέντες τὰ λοιπὰ γεννῶσι ταῖς διαφοραῖς αὐτῶν (*Dox.*, p. 484, 3-4). On the *διαφοραί* cf. *Metaphysics* 985 B 13-17 and *Dox.*, p. 484, 4-5.

197. *Metaphysics* 985 B 19-20. Cf. *Dox.*, p. 484, 5-7.

Theophrastus (*De Causis Plantarum*, VI, 7, 2) says that the atomists can explain change in three ways only: that the shapes of the atoms change; that all atoms are inherent but that change is caused by the withdrawal of the atoms that gave the previous complex its character; or that some atoms enter and some go out. The first explanation, he says, is impossible because the atoms are impassive; the second and third are ridiculous because in both cases Democritus must supply the efficient cause. For further criticism of the atomists' failure to give the cause of motion, see Theophrastus, *De Sensibus*, 52; Aristotle, *Physics*, 252 A 32 — B 5, 265 B 23-26, *De Caelo* 300 B 8-11, *Metaphysics* 1071 B 33-34.

198. *De Generatione* 325 A 2 ff.

199. *De Generatione* 325 A 2-6. Cf. *Dox.*, p. 483, 14-15.

200. *De Generatione* 325 A 13-15. Cf. *Dox.*, p. 483, 15-16 (καὶ τὸ μὴ ὄν μὴδὲ ζητεῖν συγχωροῦντων).

201. *De Generatione* 325 A 23-26. Cf. *Dox.*, p. 483, 18-19 (καὶ γένεσιν καὶ μεταβολὴν ἀδιάλειπτον ἐν τοῖς οὐσι θεωρῶν).

202. *De Generatione* 325 A 26-31. Cf. *Dox.*, p. 483, 16-17. Theophrastus says that the atoms of Leucippus are ἀπειρα καὶ ἀεὶ κινούμενα (*Dox.*, p. 483, 16). On the infinity of motion, see Aristotle, *Metaphysics* 1071 B 31-33, 1072 A 6-7, *De Caelo* 300 B 8-10. In *De Generatione* 315 B 9-11, Aristotle reports that Democritus made the shapes infinite because he thought truth to be in appearance and because phenomena are contrary and infinite. Cf. Theophrastus' statement that Leucippus made the shapes of the atoms infinite because he saw no reason why they should be of one sort rather than another and because he observed the constant generation and change in things (*Dox.*, p. 483, 16-19).

203. *De Generatione* 325 A 31-34. Cf. *Dox.*, p. 484, 5-8. Aristotle does not here state specifically that like is affected by like, but this principle is presupposed by the process of separation. Elsewhere he does attribute this principle to Democritus (*De Generatione* 323 B 10-15).

204. *Dox.*, p. 484, 4-5; cf. *Metaphysics* 985 B 13-16.

205. *Dox.*, pp. 483, 17 and 484, 7. Throughout *De Generatione* A 8 (see 325 B 18, 27-28), as well as in *De Generatione* 315 B 9-12, σχῆμα = ἄτομος.

206. See note 196.

207. See note 203.

208. Diogenes Laertius, IX, 30 (Λ. Ἐλεάτης, ὡς δέ τινες Ἀβδηρίτης, κατ'

ἐνίοις δὲ Μήλιος [Μιλήσιος should be read]. οὗτος ἤκουσε Ζήνωνος.); [Galen], *Hist. Philos.*, 3 (τοῦτον [Zeno] δὲ Ἀ. δ' Ἀβδηρίτης ἀκουστής κτλ.); Aetius, I, 3, 15 (Ἀ. Μιλήσιος); Hippolytus, *Refut.*, I, 12, 1 (Ἀ. δὲ Ζήνωνος ἐταῖρος); Epiphanius, *Adv. Haer.*, III, 2, 9 (Ἀ. δὲ Μιλήσιος, κατὰ δέ τινας Ἑλεάτης). Tzetzes (*Chil.*, II, 980) says that Leucippus was the student of Melissus; the absence of reference to Melissus in the authorities quoted above indicates that Tzetzes is not following the general doxographical tradition.

209. E.g., Burnet, pp. 331 ff.

210. *Metaphysics* 985 B 4-5; *De Generatione* 325 A 1, 23; frag. 208 (Rose, Teubner edition, p. 166, 1).

211. *De Generatione* 325 A 26-28. N.b. ἀπεφάνησαντο περὶ τῆς ἀληθείας (325 A 17) and ἐκ τοῦ κατ'ἀληθείας ἐνός (325 A 35).

212. *De Generatione* 325 A 6-12. Cf. H. H. Joachim, *Aristotle on Coming-to-be and Passing-away*, pp. 160-161; Cherniss, p. 95, n. 401.

Theophrastus (*Dox.*, p. 483, 13) links Xenophanes with Parmenides as a representative of the Eleatic school. Diels (*Dox.*, p. 483, n. 11) suggests, on the basis of Hippolytus' report, that Zeno should be added after Xenophanes. More probably, Zeno should replace Xenophanes. Xenophanes is not associated in any way with the atomists elsewhere in the doxographers. In *De Generatione* A 8, Aristotle does not mention Xenophanes by name, nor does he refer to any doctrine that can be identified as that of Xenophanes.

213. *Metaphysics* 985 B 10-13, 19-20.

214. *Physical Opinions*, frag. 13 (*Dox.*, p. 491, 19-21).

215. Melissus, frag. 2.

216. See note 202.

217. Melissus, frag. 8.

218. *De Generatione* 325 A 14-15. Cf. *Metaphysics* 986 B 18-21.

219. *Dox.*, p. 483, 14-19. Cf. Hippolytus, *Refut.*, I, 12.

220. *De Sensibus* 60; cf. *Physics* 203 B 1-2, *De Caelo* 303 A 14-15.

Theophrastus says, in the *De Sensibus*, that Democritus distinguished heavy and light by the size of the atoms (61, 68, 71). This may be correct, but it may be derived from Aristotle, *Physics* 326 A 9-10: καίτοι βαρύτερόν γε κατὰ τὴν ὑπεροχὴν φησιν εἶναι Δημόκριτος ἕκαστον τῶν ἀδιαίρετων. If this sentence is Theophrastus' source, then clearly Theophrastus has misunderstood Aristotle. Aristotle does not mean that each atom is heavier in accordance with the excess of its weight, but that each atom has relative weight when compared with any other (cf. Cherniss, p. 97, n. 412). In fact, Aristotle remarks that none of his predecessors had anything to say about absolute weight (*De Caelo* 308 A 9-11). Theophrastus himself seems elsewhere to have excluded weight from the characteristics of the atoms. Aetius (I, 3, 18; I, 12, 6) makes a point of noting that, while the atoms of Epicurus are distinguished by shape, size, and weight, those of Democritus are distinguished only by shape and size.

221. *De Sensibus*, 49 (*Dox.*, p. 513, 10-11).

222. *De Sensibus*, 50 (*Dox.*, p. 513, 27). Cf. Democritus, frag. 164.

223. *De Sensibus*, 49, 72. Theophrastus' whole account of Democritus in the *De Sensibus* shows an inclination to assume that Democritus employed contrariety.

224. *De Generatione* 315 B 6-9.

225. *Physical Opinions*, frag. 8 (= *Dox.*, p. 484, 13-16 = Simplicius, *Phys.*, p. 28, 27-30). See Zeller, I, pp. 1185 ff.

Metrodorus' profession of the atomistic theory is difficult to reconcile with his own statement that we know nothing, not even whether we know something or nothing (Metrodorus, frag. 1).

The fragment of Theophrastus and the doxographical reports based on it illustrate again the tendency of the doxographers to develop doctrinal resemblances into biographical data. While Theophrastus merely comments on the similarity between the doctrines of Metrodorus and Democritus regarding the full and the void, some of the doxographers have apparently taken this to mean that Metrodorus was also the student of Democritus (*Vors.*, II, pp. 230, 16-18; 231, 3-4; 234, 5-6).

226. *Metaphysics* 985 B 4-6.

SUMMARIES OF DISSERTATIONS FOR THE DEGREE OF PH.D.

ALFRED R. BABCOCK — *The Position of the Copula and of the Colorless Ancillary Verbs in Greek*¹

THE writer of this thesis attempts to discover the causes of the various positions assumed, in the clause or phrase, by certain verbs that have been largely neglected by students of Greek word order. These verbs are, in the first place, the copula *εἰμί*, and, in the second, the class of verbs here called *colorless ancillary verbs*. The latter are characterized by the fact that they take the complementary infinitive or the supplementary participle, and by the fact that the main sense and emphasis fall not on them, but on the dependent infinitive or participle. The colorless ancillary verbs themselves make more precise the action or state expressed by the infinitive or participle by referring it to the general concepts that they (the colorless ancillary verbs) contain. As good representatives of the colorless ancillary verbs, the following were chosen for study in this thesis: μέλλω, δοκῶ, βούλομαι, ἐθέλω, δύναμαι, ἄρχομαι ("begin"), φαίνομαι, τυγχάνω, and the impersonal verbs δεῖ, χρῆ, δοκεῖ.

In order that the reader may understand the principles and methods upon which the investigation is based, and the extent to which the findings of others have had to be modified or supplemented in order to explain the position of the verbs with which this thesis is concerned, a brief summary is made of the main procedures and accomplishments of the chief modern investigators of Greek word order. It is shown that where word order is free, the primary factor for determining the position of a given word must be the psychological and stylistic factor. Accordingly, psychological considerations are granted a paramount role in this thesis. Syntactical considerations should not be excluded, but their influence should be, and in this thesis is, carefully distinguished from that of the psychological ones.

The thesis then takes up technical aspects of the investigation; in particular, the possible positions of the verbs to be studied are defined. The copula may have initial, medial, or final position. In the case of the colorless ancillary verbs, their position with regard to the subject

¹ Degree in Classical Philology, 1953.

has already been to some extent elucidated,² and is not dealt with here; it is only with regard to their dependent infinitive or participle, and the adjuncts of the infinitive or participle, that their position is considered. If the colorless ancillaries precede the infinitive or participle and all its adjuncts, their position is deemed initial; otherwise, it is deemed non-initial. It is the initial position of the colorless ancillaries that is shown to be the more habitual one, only the non-initial one requiring explanation.

The findings of the investigation are based upon examination of certain Greek works or parts of works, in which all occurrences of the verbs with which the thesis is concerned are taken into account. The following were examined: Plato's *Apology*; Xenophon's *Anabasis* 1, and also (in the case of the colorless ancillaries) *Anabasis* 2; and passages from several books of Thucydides, the total amount of which is equivalent to about one book, and consists about equally of narrative and oratory.

Next, the causes of the various positions are set forth, with many quotations from the Greek.

The medial position of the copula is motivated in part by the same factors as the non-initial position of the colorless ancillary verbs; hence the copula and the ancillaries are to that extent treated together. The causes of their having the positions just mentioned are: desire for semantic clarity; attraction of a word to the end of the clause so that it may be near a semantically related word in a neighboring clause; or desire to cast emphasis on the word just preceding the copula or the colorless ancillary verb. Emphasis on the preceding word is brought about by the fact that the verbs have weak stress, so that the preceding word, if it has a stronger stress in its own right, benefits by the contrast and has its stress further increased. Such increased emphasis may serve to strengthen the expression of antithesis, to bring to attention the introduction of a new topic, or to bring out the inherent force of the word emphasized; or it may serve to indicate that the whole section in which the emphasis occurs is being brought to a close. The medial copula and the non-initial ancillaries may likewise increase the emphasis on a word that *follows* them at the end of a clause; the word thus emphasized leaves, by virtue of its final position, an aftereffect (often an emotional one) in the mind of the hearer.

² See H. Frisk, "Studien zur griechischen Wortstellung," *Göteborgs Högskolas Årsskrift* 39 (1933) 120 ff.

The medial copula may also be used to slow the movement of the clause as a whole, imparting to it an air of solemnity or reflectiveness.

Finally, there is a use of the medial copula which has, apparently, no special aim of its own, except insofar as it occasions a tone distinct from that of the final copula; this use of the medial copula and the use of the final copula are therefore treated together. The distinction in tone is hard to establish by the examination of single sentences; rather, it seems to be connected with the mood and character of the whole composition or of the particular passage. The medial position is much more frequent in historical narrative in Xenophon and Thucydides than in the oratorical portions, or in the *Apology* (also oratorical). It is presumably felt to be suited to composition characterized by an easygoing, natural unfolding of the thought, or where there is a feeling of explanation; while the final copula is of a more unified, compact, taut tone.

The initial copula is much less frequent than either the medial or the final copula. Its most important use is to indicate that the thought is shifting to a new plane. Such a shift occurs in transitions, but also when the clause introduced by the copula bears a special relation (e.g., that of explanation) to what precedes. The initial copula by indicating a new plane of thought makes the fact of a transition or of a special relation more noticeable.

Less important, or more sporadic, phenomena connected with the position of the copula or of the colorless ancillary verbs are described and elucidated as far as the material permits. In conclusion, attention is drawn to the variety of factors that have to be considered in explaining word order, and to the necessity for specialization in such study.

D. J. CHARLTON, S.J. — *The Portrayal of Youthful Character in Homer*¹

SINCE the Greeks, aided by their marvelous sense of the form inherent in all things, were especially fond of contemplating man, it is natural that their literature should reflect many insights concerning human character, and even that the chief value of their

¹ Degree in Classical Philology, 1951.

literature should lie in the significance which its pages thus have as documents illustrative of human nature and character. It seemed a peculiarly promising and even exciting prospect to study the more spontaneous and "automatic" literature of the earlier or archaic Greek period, and discover there what evidences there are of sympathetic or penetrating understanding of human character, and of youthful character in particular. That has been the objective of the present work, with its attempt at a full analysis of the six clearly defined and developed youthful characters in Homer.

The area marked out for study is therefore that of the earliest Greek literature. But Greek literature forms a peculiarly organic and cohesive whole. Characteristics and motifs which appear first in the Homeric poems become ever more weighted and rich with the accumulated feeling and experience of succeeding artists, eventually they are known and possessed with an increasingly reflex and conceptual awareness, and at last are set forth in the deliberate speculations of the philosophers. Thus we may expect the fourth century Greek philosophers of human nature to provide many clues for interpreting the feeling for human character of even the earliest Greek literature. It is in this role that the psychology of Plato and Aristotle, as found especially in the *Phaedrus* and *Rhetoric*, is used throughout the present work.

It is expressly said of Antilochus in the *Iliad* that none of the warriors was younger than he. He is clearly drawn in contrast to the other major characters in the *Iliad* as being younger than they, no matter what *their* relative youth may be supposed to have been. In the aggressive ardor with which Antilochus pursues the relatively simple ἀρετή of the Homeric warrior, he stands forth as an embodiment or paradigm of the basic principles which Aristotle would later set down concerning the essential teleological aspect of human personality. The pursuit of ἀρετή is inevitably acquisitive and, so to speak, centripetal in character; yet it can coexist with real altruism or friendship, which has a contrasting centrifugal aspect. Both tendencies are illustrated in Antilochus, in whom they are shown to coexist with the precarious and unstable equilibrium characteristic of youth.

In general, the characterization of Telemachus in the *Odyssey* is found to be equally sympathetic, but more subtle and penetrating. The poet, whatever may have been his technique in composition, is seen to have caught and expressed vividly and coherently in Telemachus many vital aspects of youthful character, e.g. frank and unre-

served bestowal of confidence and affection, eager and somewhat tremulous ambition, varying blends of fear and bashfulness. In particular, various educational factors, direct and indirect, are shown with their effect on Telemachus, whose character is seen to develop notably and consistently in consequence. To a marked degree, the characterization conveys an impression of the essential excellence of human nature as found in youth.

The note of conflict in human character, found throughout Greek literature down through and including the psychological analyses of Plato and Aristotle, is important in connection with the youthful characters in Homer, in whom it seems to stand in significant correlation with their relative success or excellence as evolving human persons. The importance of conflict or stress in this respect is parallel to the importance of the already mentioned teleological aspect of human character. The poet of the *Iliad* and *Odyssey* seems to have felt that the element of stress, met with in the prosecution of goals which are accepted as adequate motivation for sustained effort, is generally necessary for curbing undesirable impulses and fostering good ones. This impression is made throughout the characterization of Antilochus and Telemachus, who stand in varying degrees of relevant contrast with the only less important Peisistratus, Laodamas, and Euryalus. Significantly, the same implication is seen to be inherent in the psychological theory of Plato and Aristotle.

These circumstances make the quality of *decision*, or the capacity for making decisions, of paramount importance in the development of youthful character. It is this quality, together with her essential and skillfully portrayed femininity, which is particularly conspicuous in the young Nausicaa, not only when she has to cope with unexpected emergencies, but also in her general response to the beckoning good things of life. In an appendix to the chapter on Nausicaa, she and Telemachus are compared, as regards this "acceptance of life," to the characters in Aristophanes, who is the other chief exponent of the spirit of classical comedy in Greek literature.

The epilogue contains a cursory survey of the treatment of youthful character in later Greek literature, particularly in Pindar, Sophocles, and Euripides.

MARVIN L. COLKER — *A Critical Edition of Walter of Châtillon's Alexandreis*¹

DESPITE the high intrinsic merit and extensive influence of the *Alexandreis*, a twelfth century epic poem by Walter of Châtillon, there is no satisfactory edition of the work. The most recent edition, that of F. A. W. Müldener (Lipsiae: Teubner, 1863) is hardly an improvement over the text of Athanasius Gurger (St. Gall, 1659 = Migne, *Pat. Lat.* vol. 209), though Müldener probably did not re-write as much of the poem as Gurger (cf. Migne, vol. 209, cols. 461-462) professedly did. Müldener's manuscripts (see his *Subsidia Critica* preceding the text) seem to have been selected at random, other than his Cygneensis, which he dated 1208. This manuscript would, then, have been written only about twenty years after the publication of the poem by its author. But an examination of the codex by Stradtrat Briel of Zwickau has confirmed for me what Heinrich Christensen (*Das Alexanderlied Walters von Châtillon*, Halle: Weissenhaus, 1905, p. xii) had learned: that the date is actually 1308. Müldener did not use any of the earliest manuscripts of the *Alexandreis*. Indeed, he gave no evaluation of his textual sources and gave no variants that these sources might be evaluated by others. Nor did he present any parallels either from the classical authors whom Walter followed or from such writers as Alan of Lille, Henry of Settimello, and William the Breton, who imitated the work at an early period. The text itself suffers not only from bad readings but from faulty punctuation and the use of classical orthography. Müldener even changed proper names to make them correspond to those of Curtius.

The preparation of a new edition of the *Alexandreis* should involve, of course, a study of the earliest manuscripts. These are (with my sigla): O Oxoniensis Bodleianus Auct. F. 2. 16, L Lambethanus 471, H Hafniensis Gl. kgl. S. 2146, B Bernense Florilegium 710 (about 1,500 verses), C Catalaunense Fragmentum 50 (vss. 1, 1-163 and arg. 1). They were all executed apparently in the last part of the twelfth century but were unknown to Gurger, Müldener, and even Manitius (cf. Manitius, vol. 3, p. 926, where only later texts are listed). An investigation of OLHB shows that none is free from willful substitutions and from intrusions due to glosses but that O, the most accurately copied, has the fewest, with L containing the next

¹ Degree in Mediaeval Latin, 1951.

smallest number, whereas HB have many grosser alterations, though H² (a contemporary hand) accomplishes a great deal in improving H's bad readings. The shortness of C precludes a trustworthy estimation of its worth. Each of the three major manuscripts preserves alone at times the correct reading against the other two. The crosscurrents in the texts of OLHBC are a further indication of the early popularity of the work.

One of the results of the investigation of the manuscripts was the discovery of the original capitula of the *Alexandreis*. These escaped the knowledge of Gugger and Müldener. The reference to them at the end of the prologue puzzled W. Toischer ("Über die *Alexandreis* Ulrichs von Eschenbach," *Wien. SB.* 97 (1880), p. 313), and Christensen (*op. cit.*, p. 12 n. 3) blundered into the notion that they were identical with the verse arguments. But a comparison between the capitula of Walter's *Tractatus contra Judaeos* (ed. Migne, *Pat. Lat.* vol. 209, cols. 425-426) and those in O, Bodl. D'Orville 205 (saec. xiii), and Brit. Mus. Reg. 15 A x (saec. xiii) of the *Alexandreis* leaves no doubt that the capitula in these three manuscripts are what is meant by "ut facilius quod quesierit quis inuenire possit, totum opus per capitula distinguamus." This statement is similar to that by which the capitula of the *Tractatus* are introduced: "ea is quibus a nobis dissonat per capitula distinguamus" (*ib.*, col. 425). The position of the titles in the D'Orville and Royal codices, supported by the position of those in the *Tractatus*, indicate that they belong directly after the prologue, contrary to O, which places them at the end of the poem.

In conclusion, a list of some significant improvements over the text of Müldener may be given (the first reading in each case below is from his edition):

- | | |
|---|---|
| 1, 6 iustos: nostros OLHC | 2, 357 priorum: parentum OLHB |
| 1, 28 Martique: matrique OLHC | 3, 105 Ictibus: Cedibus OLH |
| 1, 50 elatis: elatos OLHC | 3, 165 percussum: pertussum OLH |
| 1, 110 rectam: tetra OLHBC | 3, 209 fracto: facto OLHB |
| 1, 242 arida: ardua OLH | 3, 255 excedit: et credit (et frendit B) <i>recte</i> OLH |
| 1, 458 ripae: riuo OLH | 3, 283 elidere: eludere OLH |
| 1, 501 vobis . . . omnibus: uestris . . . auribus OLH | 6, 70 amorem: amicum OLHB |
| 2, 44 ditat: donat OLH | 6, 183 recisis: reuulsis OLH |
| 2, 87 socii: proceres OLH | 6, 360 obsunt: absunt OLH |
| 2, 142 priores: minores OLH | 6, 363 amore: more OLHB |
| 2, 305 mater: proles OLH | 7, 50 noceantque: noceatque OLHB |

- | | |
|--|--|
| 3, 286 vexat: fundit OLH | 5, 500 pauco: raro OLH |
| 3, 363 recandescit: recrudescit (re-
trudescit O) <i>recte</i> LH | 6, 55 verbo: scripto OLHB |
| 3, 408 inexpugnabile: ineluctabile
OLH | 8, 457 Pennatasque: Pennatamque
OLH |
| 3, 446 foeda: feta OLH | 9, 38 mersi: mersa OLH |
| 3, 450 Festinans: Aspirans OLH | 9, 255 dedit: fugit OLH |
| 3, 480 paratas: refertas OLH | 9, 495 everso: inuerso OLH |
| 4, 53 fuit: inquit OLH | 7, 517 Martis: mortis OLH |
| 4, 187 rutilum: rutilis OLH | 8, 116 silendum: tegendum OLH |
| 4, 366 famam: palmam OLHB | 8, 180 Justitiae: Seuitie OLH |
| 4, 367 corripiantur: comperiantur
(comperiat L) <i>recte</i> OH | 8, 382 arderes: auderes OLH |
| 5, 26 hostes: enses OLH | 9, 554 huius: eui OLHB |
| 5, 89 Rorasset: Plorasset OLH | 10, 27 perhorrent: perhorret OLH |
| 5, 233 sustinet: sufficit OLH | 10, 187 adductos: addictas OLH |
| 5, 448 munere: numine OLH | 10, 428 conversus: resolutus OLHB |
| | 10, 453 toti: toto OLH |

STEPHEN GRANT DAITZ — *The De Chersoneso and the Philippica Quarta of Demosthenes: the Texts and their Relationship*¹

ALTHOUGH the prime objective of this thesis was to determine the relationship between the *De Chersoneso* and the *Philippica Quarta*, it was decided that in order for this investigation to be carried out thoroughly, the two speeches would have to be reëdited on the basis of fresh collations of the essential manuscripts. The critical apparatus found in the Oxford edition is inaccurate as well as incomplete, while the latest Teubner apparatus, although an improvement over the Oxford edition, still contains a number of mistakes.

In the Preface, the various sources of the Demosthenic text tradition are discussed: papyri, codices, testimonia, and scholia. It is shown that the testimonia and scholia are of little value in the establishment of the text of our two speeches, although the commentary of Didymos is of the greatest importance with regard to other philological problems. Only one papyrus has been found which possesses fragments of either of our two speeches: the Rendel Harris Papyrus 43, containing portions of the *Philippica Quarta*. A study of

¹ Degree in Classical Philology, 1953.

the variants of this papyrus, however, shows none of them to be superior to the readings of our manuscripts. Therefore our medieval codices remain the fundamental source for the text of Demosthenes.

Of these manuscripts, the IX/X century S is not only the oldest, but the most faithful guardian of Demosthenes' orations. This becomes particularly evident if we compare its text with that of the A family, which is filled with glosses, interpolations, and changes in grammatical constructions and word order, all betraying the attempt to make the orations smoother or easier reading. The families of F and Y represent a contamination between the S and A traditions, although their exact relationship to the latter cannot be determined. It does, however, seem clear that S is the descendant of some scholarly edition, possibly an Alexandrian edition of the time of Callimachos, while A represents an edition for the use of rhetors and school teachers who would prefer or require a more "normalized" text. For this reason, the readings of S are generally given priority, although the variants of Y, F, and A must at all times be given consideration, since even the excellent S is not lacking in occasional errors.

Following the Preface and the texts of the *De Chersoneso* and the *Philippica Quarta* along with their critical apparatuses, the analysis of the relationship between the two speeches is undertaken. The entire question for a long time revolved upon the authenticity (or non-authenticity) of the *Philippica Quarta*. However, with the discovery in 1901 of papyrus fragments containing portions of Didymos' commentary on Demosthenes, and the subsequent studies by Körte and Foucart on this subject, the genuineness of this speech was definitely established. Yet there still remained the problem of Demosthenes' defense of the theoric fund in the *Philippica Quarta*. This was solved once and for all by Glotz in 1932, who showed that the defense by Demosthenes in 341 of the theoric fund was perfectly logical, since the military fund, in existence as early as 349/8, had already absorbed most of its resources. The defense then would have been made purely for purposes of internal morale, and would in no way have jeopardized the funds needed for military preparation.

The final remaining problem, that of the common or "parallel" passages found in the two speeches, occupies the main portion of the analysis. Since the date of the *De Chersoneso* is set in March/April 341, and that of the *Philippica Quarta* in early June 341, we find it impossible to believe that Demosthenes delivered two speeches within a space of three months, of which each contained about one-third of its material in common with the other. Such repetition is unparalleled

in the public orations of Demosthenes, and from every viewpoint, literary, political, and otherwise, seems most unlikely to have been indulged in here. Equally implausible is the pamphlet theory, adopted by Körte, which holds that the *Philippica Quarta* was never actually delivered by Demosthenes, but was published as a political pamphlet. The view which we adopt, based upon the theories first set forth by Spengel in 1860, and by Adams in 1938, is that the parallel passages contained in the two speeches were originally part of the *Philippica Quarta* and not of the *De Chersoneso*, as has been generally supposed. We believe that these passages were afterwards added to the *De Chersoneso* when Demosthenes wished to revise this speech for publication.

Our evidence for this interpretation is chiefly internal. A study of the transitions between the parallel passages and the non-parallel passages in the two speeches reveals that if one removes the parallel passages from the *De Chersoneso*, no abrupt break is felt, but if we remove them from the *Philippica Quarta*, the transitions are in certain cases abrupt, or at least unsatisfactory. Further, if we examine closely the *De Chersoneso* as a whole, we find that within this one speech there are a number of verbatim repetitions, a phenomenon which is not in accord with Demosthenes' usual practice. The fact that this duplication occurs in every case between a parallel passage and a non-parallel passage again indicates that the parallel passages represent a later addition to the *De Chersoneso*.

Finally, a detailed analysis of the modifications or divergences found between the parallel passages in the *De Chersoneso* and those in the *Philippica Quarta* definitely implies the prior composition of the *Philippica Quarta*, and the later revision of the *De Chersoneso* with a view toward eliminating violent and rhetorical expressions, and toward bringing the final recension up to date. The examination further reveals that the peroration of the *De Chersoneso* must also have been revised when the parallel passages were incorporated into this speech. All indications point strongly to the summer of 340, after Philip's attack against Perinthos, as the most probable date for the final version of the *De Chersoneso* in its present form. The *Philippica Quarta* then, although delivered by Demosthenes, would have been published not by the orator himself, but by his literary executor after his death, as was done with the speech *Against Meidias*.

LOUIS H. FELDMAN — *Cicero's Conception of Historiography*¹

CICERO wrote a number of works of an historical nature which have been lost. Moreover, Atticus is represented in the *De Legibus* as urging him to compose a definitive history of Rome which he never did write. There are, however, a number of sources for reconstructing Cicero's conception of historiography. These are of two primary classes: (1) the Graeco-Roman traditions of historiography with which he was familiar; and (2) the statements in his extant works that are relevant to historiography, interpreted in the light of their setting.

Since Cicero was an avid student of Greek literature, he was greatly influenced by his readings in Greek historiography. After Herodotus and Thucydides had set the pattern, two chief schools of Greek historiography may be distinguished, the Isocratean, which was strongly marked by the rhetorico-tragic influence, and the Aristotelian, which emphasized disinterested investigation as a key to scientific knowledge. Few historians remained completely true to one school or to the other, though the Isocratean was definitely more popular. Even Polybius, who severely criticized the Isocratean historians, was himself not immune to the influence of rhetoric and of tragedy.

Eclectic that he was, Cicero attached himself to no single school of Greek historiography, Herodotean or Thucydidean, Isocratean or Aristotelian, but attempted to combine the best features, stylistic and methodological, of all. Because of his experience as an orator, he looked with favor upon Herodotus' eloquence and ability to please his audience and upon Thucydides' precision and dignity of diction, while criticizing their lack of prose rhythm. Cicero recognized the epideictic nature of Isocrates' *Panathenaicus* and approved particularly of Isocrates' moderation of style. He was fond of the elevated, rhetorico-tragic style of Isocrates' pupil, Theopompus, and actually chose to write his private memoirs, the so-called *Anecdota*, in the Theopompan style. But moderate that he was, he would not have written his general history of Rome in this style, since he found Theopompus' genius too high-spirited.

In methodology, Cicero frowned upon Herodotus' lapses into legend and expressed approval of Thucydides' devotion to truth. He admired the Aristotelian emphasis on scientific precision. He utilized Polybius

¹ Degree in Classical Philology, 1951.

to a great extent, especially as a source for chronology, in writing the early history of Rome in the second book of the *De Republica*.

Cicero also had access to a multitude of Roman sources, primary and secondary. As a statesman, he was acquainted with the *Annales Maximi* and with existing collections of laws, treaties, and orations. But since this source material was generally unorganized, he found it much more convenient to avail himself of the secondary sources. He disapproved of the childishness of such a post-Gracchan historian as Sisenna in succumbing to the lure of wonderful tales, and preferred a pre-Gracchan like Cato, who, though dry and lifeless by comparison, was more faithful to the facts. He was particularly fond of handbooks like Brutus' epitome of Fannius' history, Nepos' *Chronicon*, and Atticus' *Liber Annalis*. Yet, on doubtful points, he took pains to verify his information by examining fuller accounts, by consulting the authors and other scholars in person, or by writing to the encyclopedic and ever-available Atticus.

The chief influences on Cicero's conception of historiography were his rhetorical training and his career as an orator and as a writer. Though the rhetorical schools did not teach history as such, they did encourage the use of historical *exempla*. This training was not necessarily a bad influence, since it did promote character-analysis, vividness of style, and keenness of thought.

As an orator, Cicero was so deeply aware of the value of historical *exempla* that it is actually possible to reconstruct from the orations alone a fairly comprehensive history of Rome. However, to judge him *qua* historian from historical details embodied in the orations is extremely misleading, since the rules laid down by the rhetorical schools limited the choice of historical *exempla* and dictated the method of their presentation. Moreover, his use of this information was colored by the nature of his case, his client, and his audience.

In the philosophical treatises, Cicero was still the pleader, trying to present arguments for a given set of epistemological, theological, or moralistic teachings. The brief but numerous *exempla* which he employed to illustrate his points can hardly, therefore, be used to judge his ability as an historian.

Cicero's historiographical ideals are most clearly stated in the *De Oratore*. In brief, Cicero stood, in historical as in philosophical writing, for a synthesis of form and matter. He realized that the manner of presentation was all important to gain an audience; hence he insisted that the historian should write according to artistic rules. When he says that history is an *opus . . . unum . . . oratorium*

maxime, he means that the historical style can best be handled by the orator. And the supreme orator would, of course, be Cicero himself.

In addition to giving pleasure through stylistic refinement, history also served a utilitarian purpose in ancient times by providing guidance for future statesmen. For this purpose Cicero realized the importance of adherence to truth. The passage in *Brutus*, 42, in which Atticus chides him for taking liberty with historical facts, is not intended to point up the differences between Atticus' and Cicero's conceptions of historiography or to justify the lying of orators in the use of historical *exempla*; it is merely a jest and hardly contradicts Cicero's professions of loyalty to truth as an ideal.

Cicero's request to Lucceius to write an account of his consulship in which his merits would be exaggerated "a little more than may be allowed by truth" has frequently been cited as evidence for the levity with which he regarded the strict standards of historiography. But he wished the account to comprise a separate monograph rather than to be included in Lucceius' general history. Tradition permitted rhetorico-tragic exaggeration in monographs. The fact that Cicero asked Lucceius to disregard the laws of history shows that he knew what those laws were. The contemporary history which Atticus in the *De Legibus* urges him to write would have been larger in scope than his so-called *Anecdota* and would hardly have been considered a mere monograph. Such an account would have obeyed the exacting rules of history.

Those who seek to impugn Cicero's qualifications as an historian on the ground that his works are full of errors and inconsistencies exaggerate the case. Cicero's extant works were not written from the standpoint of the historian. Yet, a careful examination of his passing references to history reveals that he made remarkably few slips and that in some places he was correct where other ancient writers and many modern critics are wrong. Even when he did make errors, he was eager to correct them. If Cicero was accurate in incidental references, we may conclude that in an historical account, he would have exemplified those ideals of historiography that he stated so eloquently in the *De Oratore*.

GEORGE LOUIS KUSTAS — *Photius' Idea of History*¹

THE ninth century of our era for the Eastern Roman Empire of Byzantium marks an important milestone in the intellectual history of Western civilization. The Byzantines felt keenly that the age which followed the period of iconoclasm, regarded as the last great heresy to plague the Faith, was truly an age of destiny and represented not only a vindication of their theological position during the struggle over the worship of images, but a confirmation and consolidation of the whole process of Christian history. There is generated the feeling of harmony, of a completed social composition in which all the elements of Byzantine culture find their proper place. Photius, as the first encyclopedist of Byzantium, gives literary expression to this new attitude. He is not, strictly speaking, a post-iconoclastic figure: born around 820, he grew up while the controversy was still raging and, indeed, fought the heresy successfully throughout his life. The iconoclastic activity in art is marked by a sharp separation between secular and religious representation, the suppression of the latter, and the development of a secular art which draws from two sources, Hellenistic models and the contemporary scene. It is possible that this cleavage was fostered also in the realm of literature. At any rate, Photius' achievement is to enlarge the interest in the classics and to create a synthesis of what the previous age had regarded as opposing forces, under the inspiration of the great historical and theological event implicit in the defeat of iconoclasm. The sense of history, prompted by Photius' profound realization of the position of his age in the developing scheme of world history, has as one of its manifestations a new relationship between Christianity and the classics. We are in the ninth century before a kind of Christian classicism, when the early Christian centuries have taken on the aura of a golden age. An outward expression of this feeling is that Photius is the first to practice philological criticism upon the text of John Chrysostom. There is in Photius' attitude toward the classics neither the apologetic nor the polemic tone of the earlier Fathers. Christianity had come of age; it continued to use the techniques and terminology of the classical disciplines, which continued to be a living tradition in Byzantium, but adjusted them to suit its new requirements, and accepted from the classics the bequeathal of the inspirational setting against which

¹ Degree in Classical Philology, 1953.

its own superiority could be more subtly and exactly measured. This thesis undertakes to establish in its various details Photius' idea of history as seen through this relationship between classics and Christianity, and to show how its definition is determined both by the historical factors at play in ninth century Byzantium and by the transcendent personality and ability of Photius himself.

The introductory chapter discusses the genesis of the *Bibliotheca*, one of our main documents for the reconstruction of this attitude. The work was composed before Photius' official trip to Baghdad in 858. It contains reviews of works read by Photius beginning from his early years, the notes on which he now in 857 incorporates into a large work at the request of his brother, Tarasius, who wished a consolation for Photius' forthcoming absence in the East.

The second chapter analyzes three concepts by which Photius defines the aim of history, τὸ χρήσιμον, παράδειγμα, and ἀλήθεια. These concepts in historiography can be traced back to the fourth century B.C., where indeed many of the literary phenomena of Byzantium first arise. There is a distinct tendency in Photius to think of history and theology in the same terms; they are the twin pillars upon which the Christian can build his Christian existence. Both are "useful," as providing the means of insuring the well-being of the members of Christian society; both have evolved and operate through the medium of παράδειγμα (the Church Councils follow the example one of the other in the development of Christian dogma); and both aim at the acquisition of truth. History in the ninth century has achieved its aim, for with the defeat of iconoclasm the doctrines of truth have been successfully defended against the enemies of orthodoxy.

The next chapter treats Photius' terms of stylistic criticism. By and large Photius is indebted for his terminology to the second century A.D. rhetorician from Tarsus, Hermogenes. However, Photius eliminates from the Hermogenic roster those terms which run counter to his Christian taste (e.g. ἀλήθεια, which to Hermogenes is simply a rhetorical tool, equal roughly to a certain forcefulness of style). Those concepts which are retained are identical with Photius' definition of the Byzantine *oecumene* of his time, and this in turn with his conception of personal Christian virtues as set forth in his letter to Boris-Michael, the Bulgarian prince (*Patrologia Graeca*, 102, cols. 628A-696D). Hermogenes represents an absolutistic theory of style which sets up one author, Demosthenes, against whose standard all literature is to be measured. Under the influence of Christian conceptions of the individual personality and of the

uniqueness of an historical event in its own point of time, Photius rejects this attitude. The form of the *Bibliotheca* bears witness to a treatment of literary history by which each work is regarded as a unique phenomenon of time and authorship in the literary past. The balance which Photius achieves through the exercise of his historical vision is lost soon after his death. Psellos reverts to the absolutistic principle of criticism, but with him the idealized author is Christian — Gregory of Nazianzus, who is grotesquely regarded as the culmination of a process of development from the very beginnings of Greek literature irrespective of *genre*.

The last two chapters discuss respectively Photius' principles of philological criticism as enunciated in the introduction to his *Amphilochia*, and his philosophy of history. Photius applies to Scriptural exegesis a set of principles inherited from Hellenistic rhetorical theory. He insists on attention to *τόπος*, *χρόνος*, and *πρόσωπον* for the elucidation of the text, in other words, on a regard for the *περιστατικά*, or circumstances proper to a particular case. This is the principle of *οἰκειότης*, a term very frequent in Photius' writings. He is assisted in its formulation also by a study and deep understanding of the text of Saint Paul, whose influence is greatly in evidence throughout much of Photian thought. The principle is operative in a major event in the history of the ninth century, the translation of the liturgy into Slavonic, for Photius admires a similar attitude in Paul who did not disdain to address the Athenians through the use of pagan references which they could understand.

Finally, in one of the homilies Photius attacks the cyclical theory of history and favors the Christian idea of a unique linear procession. The discussion takes place in a homily which celebrates the victory "over all the heresies," chief among which in Photius' eyes is Arianism, which he compares at length in two other homilies to iconoclasm. As the belief of Arius and his followers was a "Greek" system and represented a return back into heathenism, so iconoclasm is a reactionary process which Photius condemns along with the cyclical theory of history necessary to it, because it was alien to his conception of a divinely guided majestic evolution of Christian history.

GEORGE ELDON LADD — *The Eschatology of the Didache*¹

THE problems of the historical setting of the Didache and its literary relationships with other writings have been among the unsolved problems in the history of early Christian literature. Scholars have generally felt that the content of the Didache reflected a primitive condition in the life and thought of the church. It has further been agreed that there is a definite literary relationship between the Didache and Barnabas; but different theories have been offered to explain the character of that relationship.

Recently a number of critics, basing their conclusions on the results of literary criticism, have maintained that the Didache was dependent upon Barnabas and therefore written sometime after it. This conclusion has redirected attention to the content of the book in the hope of finding an historical milieu in the second century or later which would have produced such a work.

In all of the literature about the Didache, one area of thought has been comparatively neglected, that of eschatology. Although the Didache contains the first "little apocalypse" outside the New Testament, no exhaustive study has been made of this phase of the Didache's teaching. The present investigation is designed to fill this need and to provide a detailed study of the eschatology of the Didache against the background of Jewish and Christian eschatologies. Inasmuch as such an investigation has not been previously conducted, the project may be considered a worthy end in itself. The various elements of the eschatology have been pursued to considerable length. However, the conclusions of the investigation have constantly been brought to bear upon the underlying problem of the date of the Didache and the questions which at present surround the work. In view of this objective, nothing is assumed as to the date of the book or its dependence on other writings. By pursuing a rigidly inductive method in the analysis of the eschatology and making extensive comparisons with earlier and later eschatological materials, the attempt has been made to place the eschatology of the book in the stream of Jewish-Christian eschatology and to suggest the milieu in which the eschatology would most likely have been held.

The following conclusions were achieved. The Didachist is characterized by a vital eschatology written to meet an actual anticipated situation, viz. the impending appearance of the Antichrist and

¹ Degree in Biblical and Patristic Greek, 1949.

the coming of the Lord. The source of the writer's eschatology is chiefly the Gospel of Matthew, and from it he selected those items which served his purpose. The church in which he found himself had become spiritually lax and careless, and the Didachist feared that the troubles of the end would turn Christians away from their faith to death. He writes with a high moral purpose to enforce a sense of individual responsibility and to urge faithfulness in attendance of the Christian gatherings, the means by which men might withstand the temptations of the end.

No other sources than Matthew can be established for the eschatology. The position often held that Didache 16:2 shows positive dependance upon Barnabas 4:9 cannot be sustained; but the nature of the relationship between these passages has not yet been solved.

The eschatology is vividly futuristic and apocalyptic. While there may be the concept of a present spiritual kingdom in the author's thinking, this cannot be proved. The hope of the church is the future apocalyptic kingdom when it will experience its true unity and perfection. The views expressed are entirely consistent with chiliasm and may be so interpreted; but again this cannot be proved.

While the eschatology of the Didache employs much of the conceptual material common in Jewish apocalyptic, it has received a distinctly Christian stamp. It is not likely that the final chapter existed as a Jewish apocalypse before it found its way into the Didache.

No distinct historical situation which can be identified is reflected. The Antichrist cannot be identified with any historical personage. The church was not facing a particular persecution. No doctrinal aberrations are evident. The problem faced by the author was one of spiritual and moral laxity. The eschatology certainly is not Montanist as some have contended.

The language, concepts, and purpose of the eschatology of the book have much more in common with the early Christian writings such as the New Testament books and the Apostolic Fathers than with later writings. Altogether, the eschatology of the Didache seems to be quite primitive, and the opinion of those who have considered the work to have arisen early in the life of the church is justified. The book was written at a time when the expectation of the end was a living hope, when the destiny of the church was not to be realized apart from its apocalyptic consummation. The expectations

of the writer are simple and naïve. He was a person of very ordinary abilities, but he expressed as best he could hopes and expectations that to him were vivid. It is difficult to see how the eschatology of the book could have been an archaizing production of a later period.

PHILIP LEVINE — *On the Question of Mediaeval Writing in Vercelli*¹

THE scope of this present study is to investigate how far extant historical and palaeographical evidence justifies the now traditional description of Vercelli as an important writing center at certain periods during the early Middle Ages. Much of this work was conducted in Vercelli itself, and many of the manuscripts cited were examined firsthand.

The first chapter, containing a critical survey of available historical evidence, shows that, from the time of St. Eusebius († 371) to the end of the reign of the Lombards in the third quarter of the eighth century, pathetically little is actually ascertainable about specific writing conditions in Vercelli, for early local historical documents of an informative nature, if they once existed, are now lacking. Similarly, the evidence usually adduced for scribal activity in the last part of the eighth century under Bishop Gisus is of questionable validity. This prelate owes his very existence in Vercelli at that time to a misquotation of a subscription in Bib. Cap. Cod. CLXVII, which belongs to *saec.* IX–X and not *saec.* VIII.² Further, the presence of John the Scot as abbot and teacher in the town during the first third of the ninth century is extremely dubious and unattested by contemporary records. Moreover, the decree which King Lothar issued around 825 directs students of Vercelli to attend the royal school in Pavia and hence argues against

¹ Degree in Classical Philology, 1952.

2. J. F. Leone in 1602 recorded in his inventory of the manuscripts in the Biblioteca Capitolare of the Cathedral of St. Eusebius the subscription as follows: *Gisus episcopus fieri rogavit. Vivat in Domino semper. Babo presbiter scripsi an. 795*; see his index printed in G. De-Gregory, *Istoria della Vercellese Letteratura ed Arti* (Turin, 1819–1824), iv, 3, p. 569, *sub num.* 143. The subscription found on fol. 189v actually reads thus: *Gisus eps fieri rogavit. Vivat in dño semper. Bebo presbiter scripsit.* No date at all is given, nor is anything further known about Gisus or Bebo.

the supposition of the existence of a flourishing local episcopal school at that time.

On the other hand, an important triangular relation between Vercelli, Bobbio, and St. Gall during the last two decades of the ninth century is historically well-attested through the career of Luitward, bishop of Vercelli and abbot of Bobbio, for he is known to have exchanged books with Notker Balbus, the librarian of St. Gall. However, direct evidence for local calligraphic production comes only with Atto, who, as bishop of Vercelli (924-960), established parish schools in his diocese and ordered his priests to give instruction. It is under Atto that the first *known* product of a Vercelli *scriptorium* was written, but that is at a date considerably later than that of the earlier manuscripts to which Vercelli chiefly owes its present palaeographical reputation as an important writing center.

The second chapter deals with the historical evidence for early libraries and manuscript collections, past and present, in the town. Attention is mainly directed to the Biblioteca Capitolare which contains the oldest codices, but an account is also given of the extant manuscripts in the other local libraries. Doubt is raised as to the validity of Lowe's assumption that if a very old manuscript is preserved in a still older center, there is justification in believing, in the absence of proof to the contrary, that it originates from that center.³ It is pointed out that if this assumption be allowed in the case of Vercelli, a most interesting story of its writing activity could be created since extremely little is known about the origins of the collection with the earliest manuscripts. The first evidence for the existence of a now extant and identifiable manuscript in Vercelli dates back no further than the period 888-915, in which King Berengarius I donated an ornamental cover for the old uncial codex of the pre-Jerome version of the Gospels (Bib. Cap. Cod. A), which was executed several centuries before that time. Next, two or three tenth-century manuscripts can be associated with Bishop Atto. However, from the twelfth century onward a large number of manuscripts are known from testaments, necrological records, and other documents to have been donated to the Cathedral of St. Eusebius. These later accretions cannot in all cases be with certainty identified among the extant books, and hence their age and provenience constitute a problem. Apart from a small list of some fourteen volumes entered in Bib. Cap. Cod. XV by a later hand of probably the thirteenth century,

3. Cf. E. A. Lowe, *Codices Lugdunenses antiquissimi* (Lyons, 1924), p. 11; *id. Codices Latini Antiquiores* (Oxford, 1934-), iv, pp. xii-xiii.

the earliest extant inventory of the Biblioteca Capitolare is a work of the year 1602. Thus, as it is seen, the history of the manuscript collection which provides the basic material for palaeographical study of local writing activity during the early Middle Ages is such that an investigator dare not, indeed, must not assume that any codex of those now in Vercelli, which cannot at once be assigned to another center, is therefore a product of a local *scriptorium*. Such an inference drawn *ex silentio* depends for its cogency upon the deplorable lack of information regarding the early history of old manuscripts.

In this same chapter it is pointed out that the veritable dearth of tangible evidence regarding the history of manuscript collections and writing activity in Vercelli renders well-nigh impossible a systematic method of tracing codices once located in the town but now dispersed. Complete mystery surrounds the disappearance of about 100 manuscripts bequeathed by Cardinal Bicchieri in 1227 to the canons of St. Andreas, and nothing certain is known about when or how the few manuscripts which have or seem to have some claim to provenience from Vercelli have arrived at their present homes outside the town. Despite positive statements to the effect that Giangaleazzo Visconti removed from the Cathedral at Vercelli the famous manuscript of Cicero's *Epistulae ad familiares* (Cod. 49, 9 in the Biblioteca Mediceo-Laurenziana at Florence),⁴ a close examination of the ultimate sources of such assertions makes it quite dubious whether that manuscript was ever actually in Vercelli. The current dogma arises from an earlier surmise based upon an original guess by Coluccio Salutati when he had received from Pasquino de Capellis, the chancellor of Giangaleazzo in Milan, a copy of Cicero's *Epistulae ad familiares* instead of the *Epistulae ad Atticum* which he expected and knew to be in Verona.

The third chapter is devoted to matters of palaeographical concern. The popular misconception of what constitutes a school of writing is discussed. It is pointed out that the possibility of determining subtle local differences seems to be in inverse proportion to the material available.⁵ Categorical statements of scholars about the scribes and script of Vercelli are presented, and a detailed examination of the manuscript evidence upon which such assertions are based follows.

4. Cr. R. Sabbadini, *Le scoperte dei codici latini e greci ne' secoli XIV e XV* (Florence, 1905-1914), ii, p. 121; D. Robathan, 'Libraries of the Italian Renaissance,' in J. W. Thompson, *The Medieval Library* (Chicago, 1939), p. 552.

5. Cf. A. Bruckner, *Scriptoria Medii Aevi Helvetica* (Geneva, 1935-), ii, p. 15, n. 13.

Each codex treated is accompanied with pertinent bibliographical references to special studies and with a list of available facsimiles, published and unpublished.

The conclusions drawn from the palaeographical survey may conveniently be summarized. The manuscripts of the earliest period are too few and too isolated from one another to throw any light on specific writing conditions in Vercelli from the fourth to the eighth century. To this period belong four codices in uncial and pre-Caroline cursive minuscule.⁶ Moreover, the pre-Caroline Italian minuscule of the end of the eighth and the beginning of the ninth century is represented by only two codices.⁷ So far as it can be determined, the importance which palaeographers in the past have attributed to Vercelli is based solely on these few manuscripts. Yet, not a single one of them has ever actually been proved to be a local product. Further, those manuscripts of the ninth century which have been studied constitute palaeographically too heterogeneous a group even to suggest a common origin.⁸ As in the case of the earliest books, none of the ninth-century codices is known to have been written in a local *scriptorium*.

In the tenth century, at the time of Atto, one manuscript can definitely be assigned to a local *scriptorium*.⁹ Further, similar writing is found in two more and in later additions to three others.¹⁰ Significantly enough, for most of these, reasonable non-palaeographical grounds also can be and have been adduced to support the view that this similar writing was probably done locally.

In brief, the principal contention throughout the present work is that palaeographical evidence for local scribal activity can be properly evaluated only in the light of an adequate knowledge of the nature and limitations of the historical evidence. In the case of Vercelli the latter provides an important corrective to conclusions previously drawn from the former.

6. Bib. Cap. Codd. A, CLVIII, CLXXXIII, CLXXXVIII.

7. Bib. Cap. Codd. CXLVIII, CCII.

8. Bib. Cap. Codd. CLXXV, CIV, CXLIX, CXLIV, CLXVII, CXXXIV.

9. Bib. Cap. Cod. XXXIX.

10. Cod. Vat. lat. 4322, Bib. Cap. Cod. CLXXVIII; Bib. Cap. Codd. CXLIV, XV, LXXVI.

JAMES ANDREW McDONOUGH, S.J. — *The Treatise of Gregory of Nyssa Contra Fatum, a Critical Text with Prolegomena*¹

THERE are twenty-three MSS of the *Contra fatum* of Gregory of Nyssa. Of these, six have been chosen as representatives of the three classes of MSS into which the text tradition may be divided. The first class has two families. The first family comprises those MSS which were derived from a MS no longer extant, which was written in 911 A.D. and belonged to a certain Arsenius. Codex Marcianus Venetus 68 (A), s. xii, a very conservative copy of the MS of Arsenius represents the first family in the apparatus criticus. Codex Leidensis Gronovianus 12, s. xvi, seems to have been copied from the Arsenius MS. It not only presents an accurate copy of the text, but also gives the marginal notes added to the Codex of Arsenius after A had been copied from it. Codex Musei Britannici Old Royal 16, D. I (Λ), s. xii, is a descendant of the Arsenius MS, but not a copy of it. Codex Vaticanus graecus 116, s. xv, is closely related to Λ, but is probably not an apographon. The great problem in the text tradition of *Contra fatum* is the source or sources of Codex Vaticanus graecus 1907 (S), s. xii or xiii, which is unquestionably dependent on the Codex of Arsenius, but has many readings which must come from another source. Because of its unique character and the superiority of its readings, it has been included in the apparatus criticus. But it has lost half of the text of *Contra fatum*, and what remains is often illegible. Hence we have also cited Codex Vaticanus graecus 1433 (Z), s. xiii, an apographon of S. The second family of the first class is derived from a lost MS probably older than the Codex of Arsenius, similar to it, but differing in some respects. It has corrected some of the readings of the Arsenius tradition and has added to its defects. As representatives of the second family, Codex Ambrosianus C. 135 inf. (M), s. xi, and Codex Vaticanus Pii II 4 (P), s. xi, are cited in the apparatus criticus. M is a more primitive text, a more faithful copy of its exemplar. Where M is defective, Codex Vindobonensis theologicus graecus 42 (W), s. xii, has been used. Codex Ambrosianus Q. 14 sup., s. xv, is almost certainly an apographon of P. Codex Vaticanus graecus 445, s. xvi, is perhaps an apographon of P. Codex Ambrosianus Q. 13 sup., s. xvi, is ultimately derived from P. Codex Vaticanus Reginensis 46, s. xvi, is a fragment based on a MS of the MP tradition. The second class of MSS is represented by Codex Vaticanus graecus 446 (E), s. xii. It was from a MS of this type that S acquired those read-

¹ Degree in Classical Philology, 1952.

ings which cannot be accounted for in either the text or the margins of Arsenius' MSS. Codex Parisinus graecus 503, s. xiv, is an apographon of E. Codex Vaticanus Urbinas graecus 13, s. xvii, is related to E, but is certainly not a copy of it. Urb 13 was closely related to the lost MS from which the edition of Morellus (1615), reprinted in 1638, was derived. The Migne text is based on the Morellus edition of 1638. The third class of MSS is represented by two fragments in Codex Venetus Marcianus 559 (Y), s. xii, and by Codex Ambrosianus B. 82 sup., s. xv, probably an apographon of Y. Codex Vaticanus graecus 1759, s. xvii, is an apographon of the fragments in Y. Codex Vindobonensis theologicus graecus 42, s. xiii, is an epitome; of this Codex Musei Britannici Old Royal 16. D. XI, s. xvi, is an apographon. No access to Codex Lipsiensis 13, s. xiv, was possible.

FREDERIC PEACHY — *The Homeric Story of the Cyclops*¹

THE subject of this dissertation is the narrative contained in the *Odyssey*, Book IX, vv. 105–559; the origins, composition, and characteristics of this story, and its passage into the classical literary tradition.

Because the writer wished to situate the narrative within its larger context and arrive as it were at a complete Odyssean philosophy, chapter I, on "The Homeric question," seeks to elucidate the problems of date and writing of the Homeric poems, particularly the *Odyssey*, as a background for discussion of the subject. Chapter II, on "Fact, fiction, and myth in the Wanderings of Ulysses," attempts to define the source materials of Homer in history, legend, myth, and reality, when he came to compose the adventures of Ulysses in the Western seas. The religious attitudes of the Poet, his artistic and human aims, his debt to oral and literary tradition, and to his knowledge of the world and of contemporary civilization, are deductively and comparatively set forth. Chapter III, on "The mythology of the Cyclopes," is a descriptive and interpretative discussion of the myth of the Cyclopes in Greek literature, particularly the so-called Hesiodic and Homeric versions. The effort is made to distinguish the original significance of

¹ Degree in Classical Philology, 1948.

the myth and its accretions, and to determine the traditional and fictional elements of the Poet's creation. Chapter IV, on "The *Kuklô-peia*," is a commentary on the Homeric story proper, with reference to such aspects as the text, the prosody, the characterizations and antithesis of Ulysses and Polyphemus, the dramatic nature of the narrative, its realism, its reflections of Homeric social and religious concepts, and its pastoral element.

Chapter V, on "The story's literary fortunes," traces the evolution of the tale and its central figure as a theme in Greek classical letters, particularly in the comic poets and Euripides, and leaves it on the threshold of Hellenism. The investigation of its recurrence and modifications in Roman, medieval, Renaissance, and modern literature is left for further research. From this final chapter, as well as from previous discussion of the Homeric story and Cyclopean mythology in general, the varied sources and origins of later treatments and references should become readily apparent.

HANS EBERHARD PETERSEN — *Governorship and Military Command in the First Three Centuries of the Roman Empire*¹

THE first chapter treats of the question of how far provincial governorships in the first two centuries of the Roman empire were military commands, and of how far this military function of the governors influenced the establishment and administration of provinces. Five border provinces, for which sufficient evidence is available, have been selected for this investigation.

The administration of Numidia shows how a military command developed into a provincial governorship. In Africa the military command was at first held by the proconsul. It cannot be determined how far it had become an established practice that the troops were commanded by a subordinate of the proconsul rather than by the proconsul himself, but in A.D. 39 the proconsul was permanently deprived of his command and an imperial legate was sent to command the troops. This legate was at first primarily a military commander in

¹ Degree in Classical Philology, 1953.

a region which was perhaps not formally separated from the provincia vetus until the reign of Vespasian. With the increasing Romanization of Numidia in the 2nd century the legate came to discharge the administrative duties usual for a Roman provincial governor.

As for Gaul, it is not known how the Roman troops in the province were commanded before its division into three provinces. The organization of command is not clear even for some time following the division, but it is likely that in the whole period from 16 B.C. to A.D. 17 the troops, which were by now stationed on the Rhine, were commanded directly by the superior governors of all Gaul. It is unknown whether the division of the troops into an *exercitus Germanicus superior* and an *exercitus Germanicus inferior*, which appears in A.D. 17, goes back to the period of the supreme governors of all Gaul or was established when Germanicus was recalled. The legates of the two armies, being the highest ranking officials in the region, became also the head of the civil administration of their provinces, when such an administration had been rendered necessary by the progress of Romanization.

Dacia was governed after its conquest for about a decade by consulars, whose main task was the conduct of military operations. The position of these consular governors was so powerful, that Hadrian, at his accession, considered it necessary to entrust it for a time to a reliable equestrian who also had the military qualifications. In order to decrease the power inherent in this command, Dacia was twice divided, once before the year 120 into two provinces, and again under Pius into three; these divisions ended the unified command in Dacia. Under Marcus, however, military necessity rendered such a unified command again necessary, and as a result a consular governor was placed over the *tres Daciae*, who was the supreme commander of all Roman troops stationed in these provinces.

As for Moesia, it may be said that, although the combination of the three provinces Achaia, Macedonia, and Moesia under one governor in the reign of Tiberius and Caligula did not have primarily military motives, it still seems that the ill-defined legal position of the Moesian command was at least partly due to military expediency. At any rate, it can hardly be doubted that the division of Moesia into two separate provinces in the reign of Domitian was nothing but the division of the increased Moesian army into two independent and geographically circumscribed commands.

The governors of Syria were throughout the first two centuries of the Empire among the most important military commanders. The

positions held by Corbulo and Vespasian, as well as by others, are discussed in detail from this point of view.

The second chapter treats of the change in the provincial governorships whereby, in the latter half of the 3rd century, senatorial *legati pro praetore* were replaced by equestrian *praesides*. This change occurred in Arabia between A.D. 253/260 and 263/264, in Syria Coele and Syria Phoenice not before the reign of Diocletian, in Cilicia in or before the reign of Gallienus, in Lycia-Pamphylia perhaps in or before the reign of Probus, in Pontus et Bithynia between 269 and 279, in Macedonia in or before 282/283, in Moesia inferior not before the reign of Aurelian, in Dalmatia between 247 and 277, in Pannonia inferior after c. 283, in Noricum after c. 260, in Raetia before 290, in Germania superior in or before 294, in Britain between 253/259 (probably even 271) and c. 297, in Hispania Tarraconensis between 283 and 288/289, in Baetica probably in or after the reign of Probus, and in Numidia between c. 280 and 283/284. Of the provinces in which legions were stationed, Syria Coele, Cyria Phoenice, Moesia inferior, Pannonia inferior, Britannia superior, Hispania Tarraconensis, and Numidia were governed by senatorial *legati pro praetore* after the reign of Gallienus. The change from senatorial to equestrian governors is therefore not connected with the transference of the military commands to equestrians which is attributed to Gallienus, the more so since after the middle of the 3rd century and before the reign of Diocletian equestrians replaced senators as governors of the provinces Cilicia, Lycia-Pamphylia, Pontus et Bithynia, Macedonia, and Dalmatia, in which no legions were stationed. Another explanation has to be found. An equestrian replaced a senator as governor before the reign of Diocletian, according to the available evidence, only in Arabia, Cilicia, Lycia-Pamphylia, Pontus et Bithynia, Macedonia, Dalmatia, and Numidia. The senatorial governors of all of these provinces had been of praetorian rank, with the possible exception of the governors of Dalmatia. It is suggested that the replacement of senatorial by equestrian governors in these provinces is thus merely a matter of lowered rank of the governorships concerned.

The third chapter treats of the legionary command in the 3rd century. The frequency of equestrian legionary commanders in this period has generally been treated together with the problem of the relation between the *praefecti castrorum* and the *praefecti legionis*, but the latter problem is well-nigh insolvable. Here a new approach is attempted by an investigation of the size of legionary formations. An examination of the cohortal organization of the *legio III Augusta*

shows that this legion had a full complement (of probably about 5000 men) as late as the end of the first third of the 3rd century; this result may probably be extended to the other legions of the empire. Thereupon the different strengths of legionary vexillations are examined. An analysis of the combined commands of two legions in the second half of the 3rd century suggests that these legions were at the time below strength. By a comparison with the officers holding these combined commands, the *praefecti* of the *legio III Augusta* in the last third of the 3rd century are clearly shown to be the commanding officers of the legion. The frequency of the equestrian legionary commanders in the 3rd century has generally been connected with the policy, ascribed by Aurelius Victor to Gallienus, of removing senators from all military commands. Since provinces which were garrisoned by legions were governed by senatorial *legati pro praetore* as late as the reign of Diocletian, one must, if the statement of Aurelius Victor is to be retained, assume that, beginning with the reign of Gallienus, the civil and military powers in the provincial administration were separated. Yet certain epigraphical evidence seems to imply that such a separation had not taken place even in the later years of Diocletian's reign. With the available evidence it is difficult to adduce conclusive arguments for either the accuracy or inaccuracy of Aurelius Victor's statement.

GEOFFREY B. RIDDEHOUGH — *The Text of Joseph of Exeter's Bellum Troianum*¹

IN this dissertation, the author's principal aim has been to provide a sounder text of the *Bellum Troianum* than is found in any of the editions that have so far been printed. It may be pointed out that the last edition was brought out as long ago as 1825, that is, so far as anything like the complete poem is concerned. Jusserand printed the First Book in 1877, but only as it appeared in the Paris MS, which is undoubtedly the worst of all now extant; moreover, this edition is filled with minor errors in reading or transcribing.

The dissertation is based on a collation of the five MSS known to exist, which are, in order of merit:

¹ Degree in Mediaeval Latin, 1951.

1. Westminster Abbey 18.
2. Corpus Christi College, Cambridge, 406.
3. Digby 157 (Bodleian Summary Catalogue 1758).
4. Admont, Austria (Benedictine Abbey) 128.
5. Bibl. Nationale 15015 *fonds latin* (an imperfect MS, going only as far as V, 82, of the poem, but containing in addition a valuable commentary on the entire epic).

All these MSS, including the Paris Commentary, are of the thirteenth century.

The author has based his text on the Westminster MS, but has occasionally accepted other readings. There is a list of variant readings, mainly occurring in the other four MSS, the Basel edition of 1573, the editions of Spondanus (1606), and Dresemius (1702), and the one already mentioned, most familiar to modern readers, the Delphin text edited by A. J. Valpy (London, 1825). Attention has been paid to the studies made by Jusserand, Amédée Sarradin, R. K. Root, and W. B. Sedgwick.

The relationship of one MS to another cannot be precisely established, but three points are brought out:

1. That the English MSS tend to form one class, and the Continental MSS another, the former being superior.
2. That the five MSS differ less from one another than all do from the printed editions.
3. That the editions were based on MSS, now lost, which were nearer to the Continental MSS than to the English.

The dissertation includes a complete transcription of the Paris Commentary, which, following Sedgwick, the author calls Σ ; it also gives the unfinished beginnings of a similar commentary which are found in the Admont MS, the work of a scribe who here and there borrows from Σ .

The author has compiled brief notes on the poem and on Σ , with the special intention of showing parallels in other medieval authors. For instance, a comparison with the *Excidium Troiae*, edited for the Mediaeval Academy of America by Atwood and Whitaker in 1944, shows that Joseph had evidently read the same story about Paris of Troy that was known to the man who wrote the *Excidium*: while acting as a herdsman Paris, by umpiring a contest between two rival bulls, wins such a reputation for impartiality that Juno, Minerva, and

Venus choose him to award the prize of beauty. The author of Σ makes it clear that this tale was known to Joseph, though the poet himself merely alludes to it briefly (ii, 579-580).

A few of the more notable readings given in this edition are: *alternis* (for *alterius*), I, 526; *Iunoque* (for *uinoque*), II, 134; *nutu* (for *casu*), II, 446; *armata decurre manu*, III, 130; *debent* (for *seruant*), III, 397; *ultrices* (for *uictrices*), III, 415; *uouent* (for *fouent*), IV, 100; *nox* (for *gens*), IV, 221; *arua* (for *arma*), IV, 336; *latebras* (for *lacrymas*), IV, 362; *uelata* (for *uariata*), IV, 463; *tenebras* (for *tenebris*), V, 27; *interga supinum*, V, 249; *rupere* (for *rapuere*), V, 529; *pregnantia* (for *pugnantia*), VI, 5; *auro* (for *arcu*), VI, 84; *exustos* (for *exutos*), VI, 343; *orantibus*, VI, 409; *immersa* (for *immensa*), VI, 641; *an danda* (for *addenda* or *audenda*), VI, 721; *senis* (for *secat*), VI, 810; *famulate* (for *simulate*), VI, 819; and *indigenis* (for *indignis*), VI, 920.

The author has striven to give the poem a more satisfactory punctuation than it has hitherto possessed; in this task he has been guided, but not rigidly governed, by the punctuation found in the English MSS.

FREDERICK HOLDEN BUCK — *A Comparative Study of Postpositions in the Mongolian Dialects and in the Written Language*¹

¹ Degree in Linguistics (formerly Comparative Philology), 1953.

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